

P03371US0 Sequence listing).txt
SEQUENCE LISTING

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<150> GB 0403746.1
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<212> DNA

<213> *Aspergillus fumigatus*

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 <213> Aspergillus fumigatus
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 35 40 45

Gly Val Thr Phe Gln Asn Arg Leu Gly Leu Ala Pro Leu Cys Gln Tyr
 50 55 60

Ser Ala Gln Asp Gly His Met Thr Asp Tyr His Ile Ala His Leu Gly
 65 70 75 80

Gly Ile Ala Gln Arg Gly Pro Gly Leu Met Leu Ile Glu Ala Thr Ala
 85 90 95

Val Gln Pro Glu Gly Arg Ile Thr Pro Gln Asp Val Gly Leu Trp Lys
 100 105 110

Asp Ser Gln Ile Ala Pro Met Arg Arg Val Ile Asp Phe Val His Ser
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Gln Gly Gln Lys Ile Gly Val Gln Leu Ala His Ala Gly Arg Lys Ala
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135

140

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Val Gly Gly Trp Pro Asp Arg Val Lys Gly Pro Gly Asp Ile Pro Phe
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Ala Glu Pro Phe Ala Lys Pro Lys Ala Met Thr Leu Asp Glu Ile Glu
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Gln Phe Lys Lys Asp Trp Val Ala Ala Thr Lys Arg Ala Ile Ala Ala
195 200 205

Gly Ala Asp Phe Val Glu Ile His Asn Ala His Gly Tyr Leu Leu Ser
210 215 220

Ser Phe Leu Ser Pro Ala Ala Asn Asn Arg Thr Asp Gln Tyr Gly Gly
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Ser Phe Glu Asn Arg Ile Arg Leu Ser Leu Glu Ile Ala Gln Leu Thr
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Arg Asp Ala Val Gly Pro His Val Pro Val Phe Leu Arg Ile Ser Ala
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Ser Asp Trp Cys Glu Glu Thr Leu Pro Glu Gln Ser Trp Lys Ser Glu
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Asp Thr Val Arg Phe Ala Gln Glu Leu Val Lys Gln Gly Ala Val Asp
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Ser Gly Pro Ala Phe Gln Val Pro Phe Ala Val Ala Val Lys Lys Ala
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Val Gly Asp Lys Leu Leu Val Ala Ala Val Gly Ala Ile Thr Asn Gly
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Lys Gln Ala Asn Gln Ile Leu Glu Glu Gln Asp Ile Asp Val Ala Leu
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Val Gly Arg Gly Phe Gln Lys Asp Pro Gly Leu Ala Trp Thr Phe Ala
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Gln His Leu Gly Val Glu Ile Ser Met Ala Asn Gln Ile Arg Trp Gly
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Gln Ser Ile Phe Asp Val
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 <213> *Aspergillus fumigatus*

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Asn Pro Gln Ser Asp Gly Ser Ala Pro Pro Lys Leu Phe Arg Pro Leu
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Cys Gln Tyr Ser Ala Asp Asp Gly His Met Thr Pro Trp His Met Ala
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His Leu Gly Gly Ile Ala Gln Arg Gly Pro Gly Phe Leu Met Val Glu
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Ala Thr Ala Val Glu Pro Glu Gly Arg Ile Thr Pro Gln Asp Leu Gly
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Leu Trp Lys Asp Ser Gln Ile Glu Pro Leu Ser Arg Val Ile Glu Phe
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Arg Lys Ala Ser Thr Val Ala Pro Trp Leu Ser Ala Asn Asp Thr Ala
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Ser Glu Lys Met Gly Gly Trp Pro Gly Arg Val Lys Gly Pro Thr Asn
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Val Pro Phe Thr Val Lys Asn Pro Val Pro Lys Glu Met Thr Lys Gln
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Asp Ile Glu Asp Leu Lys Thr Ala Trp Val Ala Ala Val Lys Arg Ala
195 200 205

Val Lys Ala Gly Ala Asp Phe Ile Glu Ile His Asn Ala His Gly Tyr
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225 230 235 240

Tyr Gly Gly Ser Phe Glu Asn Arg Ile Arg Leu Ser Leu Glu Ile Ala
245 250 255

Lys Leu Thr Arg Glu Asn Val Pro Lys Asp Met Pro Val Phe Leu Arg
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P03371US0 Sequence listing).txt

Val Ser Ala Thr Asp Trp Leu Glu Glu Val Gln Pro Asn Lys Pro Ser
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Trp Arg Gly Val Asp Thr Val Arg Phe Ala Lys Ile Leu Ala Glu Thr
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Gly Tyr Val Asp Val Leu Asp Val Ser Ser Gly Gly Thr His Ser Glu
305 310 315 320

Gln His Ile His Ala Lys Pro Gly Phe Gln Ala Pro Phe Ala Ile Ala
325 330 335

Val Lys Asn Ala Val Gly Asp Lys Leu Ala Val Ala Ser Val Gly Met
340 345 350

Ile Ala Ser Ala His Leu Ala Asn Ser Leu Leu Glu Lys Asp Gly Leu
355 360 365

Asp Leu Val Leu Val Gly Arg Gly Phe Gln Lys Asn Pro Gly Leu Val
370 375 380

Trp Ala Trp Ala Asp Glu Leu Asn Val Glu Ile Ser Met Ala Asn Gln
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<213> Aspergillus fumigatus

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35           40           45

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Val Thr Leu Lys Asn Arg Ile Met Val Ser Pro Met Cys Met Tyr Ser
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Cys Glu Ser Asp Pro Ser Ser Pro His Val Gly Ala Leu Thr Asn Tyr
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His Leu Ala His Leu Gly His Leu Ala Leu Lys Gly Ala Gly Leu Val
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145 150 155 160

Leu Ala Ala Gln Ala Gly Lys Ser Ser Leu Lys Ala Asp Glu Ser Val
165 170 175

Gly Gly Trp Pro Ala Asp Val Val Gly Pro Ser Gly Gly Glu Glu His
180 185 190

Ile Phe Ser Pro Glu Glu Asp Ala Tyr Trp Val Pro Arg Ala Leu Ser
195 200 205

Thr Ala Glu Val Arg Gln Val Val Ala Ala Phe Ala Lys Ser Ala Arg
210 215 220

Leu Ala Val Gln Ala Gly Val Asp Val Ile Glu Ile His Gly Ala His
225 230 235 240

Gly Tyr Leu Ile Asn Glu Phe Leu Ser Pro Val Thr Asn Lys Arg Thr
245 250 255

Asp Ala Tyr Gly Gly Ser Phe Glu Asn Arg Thr Arg Ile Val Arg Glu
260 265 270

Val Ala Ala Ala Ile Arg Ala Val Ile Pro Glu Gly Met Pro Leu Phe
275 280 285

Leu Arg Ile Ser Ala Thr Glu Trp Leu Glu Gly Gln Pro Val Ala Ala
290 295 300

Glu Ser Gly Ser Trp Asp Met Gln Ser Ser Leu Glu Leu Val Lys Lys
305 310 315 320

Leu Pro Glu Trp Gly Ile Asp Leu Val Asp Val Ser Ser Ala Ala Asn
325 330 335

His Lys Asp Gln Lys Ile Asn Leu His Thr Ala Tyr Gln Thr Asp Leu
340 345 350

P03371US0 Sequence listing).txt

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Val Gly Ala Val Gly Leu Ile Thr Asp Ser Glu Gln Ala Arg Gly Leu
370 375 380

Val Gln Gly Ala Asp Glu Ala Thr Ala Ala Glu Ala Met Leu Ser Gly
385 390 395 400

Pro Glu Pro Lys Ala Asp Ala Ile Leu Ile Ala Arg Gln Phe Leu Arg
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<210> 9
<211> 1269
<212> DNA
<213> Aspergillus nidulans

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 <213> Aspergillus nidulans

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 35 40 45

Gly Val Thr Phe His Asn Arg Leu Gly Leu Ala Pro Leu Cys Gln Tyr
 50 55 60

Ser Ala Glu Asp Gly His Met Thr Asp Tyr His Ile Ala His Leu Gly
 65 70 75 80

Gly Ile Ala Gln Arg Gly Pro Gly Leu Met Met Ile Glu Ala Thr Ser
 85 90 95

Val Ser Pro Glu Gly Arg Ile Thr Pro Gln Asp Val Gly Leu Trp Lys
 100 105 110

Asp Ser Gln Ile Ala Pro Met Lys Arg Val Ile Asp Phe Val His Ser
 115 120 125

Gln Ser Gln Lys Ile Gly Val Gln Ile Ala His Ala Gly Arg Lys Ala
 130 135 140

Ser Asn Ile Ala Pro Trp Leu Met Asn Lys Gly Ile Val Ala Thr Glu
 145 150 155 160

Lys Val Gly Gly Trp Pro Asp Arg Val Ile Gly Pro Ser Thr Val Pro
 165 170 175

P03371US0 Sequence listing).txt

Phe His Glu Thr Phe Pro Thr Pro Lys Ala Met Thr Lys Asp Asp Ile
 180 185 190
 Glu Gln Phe Lys Arg Asp Trp Phe Asp Ala Cys Lys Arg Ala Ile Ala
 195 200 205
 Ala Gly Ala Asp Phe Ile Glu Ile His Asn Ala His Gly Tyr Leu Leu
 210 215 220
 Ser Ser Phe Leu Ser Pro Ser Ser Asn Thr Arg Thr Asp Glu Tyr Gly
 225 230 235 240
 Gly Ser Phe Glu Asn Arg Ile Arg Leu Ser Leu Glu Ile Ala Gln Val
 245 250 255
 Thr Arg Asp Ala Val Gly Pro Asn Val Pro Val Phe Leu Arg Val Ser
 260 265 270
 Ala Thr Asp Trp Ile Glu Glu Thr Leu Pro Glu Glu Ser Trp Lys Leu
 275 280 285
 Ser Asp Ser Val Arg Phe Ala Glu Ala Leu Ala Ala Gln Gly Ala Ile
 290 295 300
 Asp Leu Ile Asp Val Ser Ser Gly Gly Val His Ala Ala Gln Lys Ile
 305 310 315 320
 Lys Ser Gly Pro Ala Phe Gln Ala Pro Phe Ala Val Ala Ile Lys Lys
 325 330 335
 Ala Val Gly Asp Lys Leu Leu Val Ala Thr Val Gly Thr Ile Thr Asn
 340 345 350
 Gly Lys Gln Ala Asn Lys Leu Leu Glu Glu Glu Gly Leu Asp Val Ala
 355 360 365
 Leu Val Gly Arg Gly Phe Gln Lys Asp Pro Gly Leu Ala Trp Thr Phe
 370 375 380
 Ala Gln His Leu Asp Val Glu Ile Ala Met Ala Ser Gln Ile Arg Trp
 385 390 395 400
 Gly Phe Thr Arg Arg Gly Gly Thr Pro Tyr Ile Asp Pro Lys Ala Tyr
 405 410 415
 Lys Glu Ser Ile Phe Glu
 420

P03371US0 Sequence listing).txt

<210> 11
 <211> 1299
 <212> DNA
 <213> Candida albicans

<400> 11
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 tattacactc cagaacagcc tgttccggct ggtacttttt atccccaatc gtcagatgaa 120
 gttgctccca aaatTTTTca acctttaaag attggttaagc ttgctttgcc aaacagaatt 180
 ggggtatctc caatgtgtca atattctgct gattataatt ttgaagcaac tccataccat 240
 ttaatccatt atggttcatt agtgaatcgt gggccaggtta tcaccattgt tgaaagcacg 300
 gctgtttctc ctgaggggtg attatcacct catgatttag gaatctggaa ggatgaacaa 360
 gcagagaaat tgaaaccaat tgtcgattac gctcattctc aaaagcaatt aattgccatc 420
 caattgggcc atggtggtag aaaagcttct ggtcagccct tatttttgca cttggaacaa 480
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 ttcagaccaa atggtaattt acctgttcct aatgagttga ccaaagatga aatcaaacgt 600
 gttgttaagg attttggtgc tgctgctaga agagctgttg aaatcagtgg ctttgatgca 660
 gttgagattc atggtgctca tggttatttg attaatgagt tctatagtcc tatttcaaac 720
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 atcgatagtg ttaaatacag tattccaaac gatgttccag tgtttttgag aatctctgct 840
 gctgaaaata gtcctgatcc agaagcttgg actattgaag attccaaaaa attagctgac 900
 attttagtag aaaagggat tgccttggtt gatgtttcat ctggtggtaa cgattataga 960
 caaccaccaa gatctgggat cagtaaagag ttgagagagc caatccatgt tccgttgtct 1020
 cgtgcaatta aacaacatgt tggtgacaag ttattggtca gttgcgttgg tgggcttgaa 1080
 aaagatcctg aattgctcaa caaatattta gaagaaggaa catttgatct tgctttgatc 1140
 ggtagaggat ttttaagaaa tccaggtttg gtatgggagt ttgccgataa acttggtggt 1200
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<210> 12
 <211> 432
 <212> PRT
 <213> Candida albicans

<400> 12

Met Thr Val Pro Tyr Gln Val Lys Pro Ser Asp Glu Ile Lys Gly Ala
 1 5 10 15

P03371US0 Sequence listing).txt

Pro Glu Val Ser Tyr Tyr Thr Pro Glu Gln Pro Val Pro Ala Gly Thr
20 25 30

Phe Tyr Pro Gln Ser Ser Asp Glu Val Ala Pro Lys Ile Phe Gln Pro
35 40 45

Leu Lys Ile Gly Lys Leu Ala Leu Pro Asn Arg Ile Gly Val Ser Pro
50 55 60

Met Cys Gln Tyr Ser Ala Asp Tyr Asn Phe Glu Ala Thr Pro Tyr His
65 70 75 80

Leu Ile His Tyr Gly Ser Leu Val Asn Arg Gly Pro Gly Ile Thr Ile
85 90 95

Val Glu Ser Thr Ala Val Ser Pro Glu Gly Gly Leu Ser Pro His Asp
100 105 110

Leu Gly Ile Trp Lys Asp Glu Gln Ala Glu Lys Leu Lys Pro Ile Val
115 120 125

Asp Tyr Ala His Ser Gln Lys Gln Leu Ile Ala Ile Gln Leu Gly His
130 135 140

Gly Gly Arg Lys Ala Ser Gly Gln Pro Leu Phe Leu His Leu Glu Gln
145 150 155 160

Val Ala Asp Lys Ser Val Asn Gly Phe Ala Asp Lys Ala Val Ala Pro
165 170 175

Ser Ala Leu Ala Phe Arg Pro Asn Gly Asn Leu Pro Val Pro Asn Glu
180 185 190

Leu Thr Lys Asp Glu Ile Lys Arg Val Val Lys Asp Phe Gly Ala Ala
195 200 205

Ala Arg Arg Ala Val Glu Ile Ser Gly Phe Asp Ala Val Glu Ile His
210 215 220

Gly Ala His Gly Tyr Leu Ile Asn Glu Phe Tyr Ser Pro Ile Ser Asn
225 230 235 240

Lys Arg Thr Asp Glu Tyr Gly Gly Ser Phe Glu Asn Arg Thr Arg Phe
245 250 255

Leu Lys Glu Val Ile Asp Ser Val Lys Ser Ser Ile Pro Asn Asp Val
260 265 270

P03371US0 Sequence listing).txt

Pro Val Phe Leu Arg Ile Ser Ala Ala Glu Asn Ser Pro Asp Pro Glu
275 280 285

Ala Trp Thr Ile Glu Asp Ser Lys Lys Leu Ala Asp Ile Leu Val Glu
290 295 300

Lys Gly Ile Ala Leu Val Asp Val Ser Ser Gly Gly Asn Asp Tyr Arg
305 310 315 320

Gln Pro Pro Arg Ser Gly Ile Ser Lys Glu Leu Arg Glu Pro Ile His
325 330 335

Val Pro Leu Ser Arg Ala Ile Lys Gln His Val Gly Asp Lys Leu Leu
340 345 350

Val Ser Cys Val Gly Gly Leu Glu Lys Asp Pro Glu Leu Leu Asn Lys
355 360 365

Tyr Leu Glu Glu Gly Thr Phe Asp Leu Ala Leu Ile Gly Arg Gly Phe
370 375 380

Leu Arg Asn Pro Gly Leu Val Trp Glu Phe Ala Asp Lys Leu Gly Val
385 390 395 400

Arg Leu His Gln Ala Leu Gln Leu Gly Trp Gly Phe Trp Pro Asn Lys
405 410 415

Gln Gln Ile Val Asp Leu Ile Glu Arg Thr Ser Lys Leu Glu Val Asn
420 425 430

<210> 13
<211> 1110
<212> DNA
<213> Candida albicans

<400> 13
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acattaccta atagaattgg tgtttcacca atgtgcatgt attcatcgtc accaactgac 120
aatcaagcca ctctgtttca ttttgttcat tatggatcat ttgctgtacg tggaccagca 180
ttaatcattt tagagagtat ctttgtgtcc gaaaattccg gattatccat tcatgattta 240
ggctctttgga atgatgatca agctcacagt ttacggaaaa ttgttgattt tattcatgat 300
caagacggaa tttgctgtat acaattgaat cacgctgggc gaaagattgt tgaaggggta 360
ccattccaac aaatacaaca tggttggcaa gaacattgtg tggggccatc tactgagcca 420
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P03371US0 Sequence listing).txt

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gctgaccaat acggggggctc atttgaaaac agagtttagat ttctttttaca aataattgag 660
aatataaaac gaaagataga aacaccgatt ttcttaaagt ttccaatgtc agataattgt 720
agtgatccgg aagcgtggtc tacggaagat gcattgaagt tggccgatct tgttattgat 780
ttaggagtaa aggtgatcga cgttacatca ggtggaaatg ttgcgcatg caaatctaga 840
tatctattaa atgacgacaa acaactacct tctcaagtgc ccttggtctg taaattgaaa 900
agccacatta gaaaccgatg tttgatcgca tgcagtggag gattagatcg agacatattt 960
aaactcgatg agttttattgc taatggtgac tttgatatag cattgatagg taaaggattt 1020
ctcaaaaaca ctggattgat cagccgtatt gctgaccaat tgcaagcaca attcagaaca 1080
gcacctcaat ataagttggc cttatcataa 1110

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<210> 14
 <211> 369
 <212> PRT
 <213> Candida albicans

<400> 14

Met Glu Asn Asn Asn Thr Ile Pro Ala Leu Phe Gln Pro Ile Lys Ile
 1 5 10 15

Ser Asp Ser Ile Thr Leu Pro Asn Arg Ile Gly Val Ser Pro Met Cys
 20 25 30

Met Tyr Ser Ser Ser Pro Thr Asp Asn Gln Ala Thr Leu Phe His Phe
 35 40 45

Val His Tyr Gly Ser Phe Ala Val Arg Gly Pro Ala Leu Ile Ile Leu
 50 55 60

Glu Ser Ile Phe Val Ser Glu Asn Ser Gly Leu Ser Ile His Asp Leu
 65 70 75 80

Gly Leu Trp Asn Asp Asp Gln Ala His Ser Leu Arg Lys Ile Val Asp
 85 90 95

Phe Ile His Asp Gln Asp Gly Ile Cys Cys Ile Gln Leu Asn His Ala
 100 105 110

Gly Arg Lys Ile Val Glu Gly Val Pro Phe Gln Gln Ile Gln His Gly
 115 120 125

P03371US0 Sequence listing).txt

Trp Gln Glu His Cys Val Gly Pro Ser Thr Glu Pro Phe Ser Asp Ser
130 135 140

His Asn Thr Pro Arg Glu Leu Thr Val Asn Glu Ile Asn Ser Ile Val
145 150 155 160

Glu Asp Phe Ala Asn Ala Ala Trp Arg Ala Val Glu Ile Ser Lys Phe
165 170 175

Asp Ala Ile Glu Ile His Cys Ala Asn Gly Cys Leu Ile His Gln Phe
180 185 190

Leu Ser Lys Leu Thr Asn Lys Arg Ala Asp Gln Tyr Gly Gly Ser Phe
195 200 205

Glu Asn Arg Val Arg Phe Leu Leu Gln Ile Ile Glu Asn Ile Lys Arg
210 215 220

Lys Ile Glu Thr Pro Ile Phe Leu Lys Phe Pro Met Ser Asp Asn Cys
225 230 235 240

Ser Asp Pro Glu Ala Trp Ser Thr Glu Asp Ala Leu Lys Leu Ala Asp
245 250 255

Leu Val Ile Asp Leu Gly Val Lys Val Ile Asp Val Thr Ser Gly Gly
260 265 270

Asn Val Ala His Cys Lys Ser Arg Tyr Leu Leu Asn Asp Asp Lys Gln
275 280 285

Leu Pro Ser Gln Val Pro Leu Ala Arg Lys Leu Lys Ser His Ile Arg
290 295 300

Asn Arg Cys Leu Ile Ala Cys Ser Gly Gly Leu Asp Arg Asp Ile Phe
305 310 315 320

Lys Leu Asp Glu Phe Ile Ala Asn Gly Asp Phe Asp Ile Ala Leu Ile
325 330 335

Gly Lys Gly Phe Leu Lys Asn Thr Gly Leu Ile Ser Arg Ile Ala Asp
340 345 350

Gln Leu Gln Ala Gln Phe Arg Thr Ala Pro Gln Tyr Lys Leu Ala Leu
355 360 365

Ser

P03371US0 Sequence listing).txt

<210> 15
 <211> 1305
 <212> DNA
 <213> Neurospora crassa

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 actctcttca cccctctcaa gatccgtggt gttgagctcc agaaccgctt cgccgttgcg 180
 cccatgtgca cctactctgc cgacgatggc cacatgaccg actggcacct tgtccacctg 240
 ggctccttcg ccctccgcgg tgtccccctc accatcttcg aggccaccgg cgtcctcccc 300
 aacggccgca tcacccccga gtgctctggt ctctggcagg actcccagat tgcgcccctc 360
 aagcgcacgc tcgactacat ccactcccag ggccagaagg ccggtatcca gcttgcccac 420
 gccggccgca aggcctccac caaggcccc tggcactacc agcgcggcaa gagcgagctt 480
 gccggccccg agcagggtgg ctggccccgag aacgtctggg cccccagcgc catcagctac 540
 aacgaggaga ctttccccctt cccaaggag atgaccgtcg agcagatcca cgagctcgtc 600
 gaggcctgga aggcgtctgc ccagcgtgcc ctcaaggccg gcttcgacct cattgagatc 660
 cacgccgccc acggctacct catttccgag ttcttgagcc ccatctccaa ccagcgtacc 720
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 aagatcaacg tccacaccta ctaccagatc gacatggccg agcagatccg cgcggccgtg 1020
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 ggtcctctta gcagcaggcc caagaagttg accactgttc cttaa 1305

<210> 16
 <211> 434
 <212> PRT
 <213> Neurospora crassa

<400> 16

Met Ala Asp Phe Thr Gln Lys Lys Thr Ser Ser Pro Ala Ala Pro Gly
 1 5 10 15

P03371US0 Sequence listing).txt

Val Pro Phe Tyr Thr Pro Ala Gln Val Pro Ala Ala Gly Thr Pro Leu
20 25 30

Pro Ser Thr Pro Gly Asp Val Pro Thr Leu Phe Thr Pro Leu Lys Ile
35 40 45

Arg Gly Val Glu Leu Gln Asn Arg Phe Ala Val Ala Pro Met Cys Thr
50 55 60

Tyr Ser Ala Asp Asp Gly His Met Thr Asp Trp His Leu Val His Leu
65 70 75 80

Gly Ser Phe Ala Leu Arg Gly Val Pro Leu Thr Ile Phe Glu Ala Thr
85 90 95

Gly Val Leu Pro Asn Gly Arg Ile Thr Pro Glu Cys Ser Gly Leu Trp
100 105 110

Gln Asp Ser Gln Ile Ala Pro Leu Lys Arg Ile Val Asp Tyr Ile His
115 120 125

Ser Gln Gly Gln Lys Ala Gly Ile Gln Leu Ala His Ala Gly Arg Lys
130 135 140

Ala Ser Thr Lys Ala Pro Trp His Tyr Gln Arg Gly Lys Ser Glu Leu
145 150 155 160

Ala Gly Pro Glu Gln Gly Gly Trp Pro Glu Asn Val Trp Ala Pro Ser
165 170 175

Ala Ile Ser Tyr Asn Glu Glu Thr Phe Pro Phe Pro Lys Glu Met Thr
180 185 190

Val Glu Gln Ile His Glu Leu Val Glu Ala Trp Lys Ala Ser Ala Gln
195 200 205

Arg Ala Leu Lys Ala Gly Phe Asp Leu Ile Glu Ile His Ala Ala His
210 215 220

Gly Tyr Leu Ile Ser Glu Phe Leu Ser Pro Ile Ser Asn Gln Arg Thr
225 230 235 240

Asp Gln Tyr Gly Gly Ser Phe Glu Asn Arg Thr Arg Val Leu Arg Glu
245 250 255

Ile Ile Ser Ala Val Arg Ser Val Ile Pro Glu Asp Met Pro Leu Phe
260 265 270

P03371US0 Sequence listing).txt

Val Arg Val Ser Ala Thr Glu Trp Met Glu Tyr Thr Gly Gln Pro Ser
275 280 285

Trp Asp Leu Gln Gln Thr Ile Glu Leu Ala Lys Ile Leu Pro Asp Leu
290 295 300

Gly Val Asp Leu Leu Asp Val Ser Ser Gly Gly Asn Asn Lys Asp Gln
305 310 315 320

Lys Ile Asn Val His Thr Tyr Tyr Gln Ile Asp Met Ala Glu Gln Ile
325 330 335

Arg Ala Ala Val His Glu Ala Gly Lys Gln Leu Leu Val Gly Ala Val
340 345 350

Gly Leu Val Thr Ser Ala Glu Ile Ala Lys Glu Thr Val Gln Glu Lys
355 360 365

Glu Asp Gly Arg Val Thr Ile Gln Arg Glu Asn Gly Ala Lys Thr Arg
370 375 380

Ala Asp Met Val Leu Val Ala Arg Gln Phe Leu Lys Glu Pro Glu Phe
385 390 395 400

Val Leu Thr Val Ala Asp Glu Leu Gly Val Asp Val Lys Ala Pro Val
405 410 415

Gln Tyr Leu Arg Gly Pro Leu Ser Ser Arg Pro Lys Lys Leu Thr Thr
420 425 430

Val Pro

<210> 17

<211> 1476

<212> DNA

<213> Neurospora crassa

<400> 17

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cacctgcca accccgaact cgccgccgtc tacgccacct gggcccgcgg cgactggggc	180
ctgattctca ccggcaacgt ccaagtcgac cacgcgcaca agggcgacgc ccacgacatc	240
agccccaacc accccggcac cacgcccag cagaccgtca cggccttcaa ggcctggggc	300
gacgccgcgc gcctgaatgg ccagtccaaa acgcctgtgg tcgtgcagat caaccaccct	360

P03371US0 Sequence listing).txt

ggtcgccaga gtccgatggg cgcgggcacg cggggactgt gggagaaggc ggtggcgccc	420
tcgccggtgc cgttggtggt gggagaggcg tttgtgcctc gcttggtgtc gaaagtgtt	480
ttcggcacgc cgcgggagct gacggttgcg gagatcaagg atatcgtgca aaagtttgcg	540
gtgacggcga ggatcacggc cgaggccggg ttcaatggcg tggagatcca tgcggcgcat	600
ggatacctgt tggcgagtt cttgagcaag aagacaaaca ggcgcgggga tgagtatggc	660
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gttgctgtc gtgaacaaca aaaggggcac ggaacaaatg ctaacgccat acagatggc	1020
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ggacgcccgg ccatcatcaa cccttcgctt cccgccaact tgatcctcaa cccggagggtg	1260
ccggatgcgg atgcccgtt gttcgacaag aagagggtg agccgcactg gatcgttgag	1320
aagttgggca tgaagtccat tgttggtgct ggtgttgagg tggtagctca cgttccaacc	1380
ccatttgctt cattgtgttt ccgagtatgt catgctgact tggttctttt ctagacgtgg	1440
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<210> 18
 <211> 1314
 <212> DNA
 <213> *Neurospora crassa*

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cacctgcca accccgaact cgccgccgtc tacgccacct gggcccgcgg cgactggggc	180
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agccccaacc accccggcac cacgcccag cagaccgtca cggccttcaa ggcctgggcg	300
gacgccgcgc gcctgaatgg ccagtccaaa acgcctgtgg tcgtgcagat caaccacct	360
ggtcgccaga gtccgatggg cgcgggcacg cggggactgt gggagaaggc ggtggcgccc	420
tcgccggtgc cgttggtggt gggagaggcg tttgtgcctc gcttggtgtc gaaagtgtt	480
ttcggcacgc cgcgggagct gacggttgcg gagatcaagg atatcgtgca aaagtttgcg	540

P03371US0 Sequence listing).txt

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agtgcggatt ggcaggcggg acgcgatgga aaggaggagg aggagacgga tacggcggag	840
gaggtgttga agcagattga gctttttgag cagtggggga tcgactttgt cgaggttagc	900
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aagagggtcg agccgcactg gatcgttgag aagttgggca tgaagtccat tgttggtgct	1260
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<210> 19
 <211> 437
 <212> PRT
 <213> Neurospora crassa

<400> 19

Met	Ala	Thr	Ser	Thr	Thr	Ser	Asp	Leu	Lys	Leu	Ser	Gln	Pro	Leu	Thr
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Leu	Pro	Asn	Gly	Leu	Thr	Leu	Pro	Asn	Arg	Leu	Val	Lys	Ala	Ala	Met
			20					25					30		

Ala	Glu	Gln	Met	Gly	Phe	Gly	Asn	His	Leu	Pro	Asn	Pro	Glu	Leu	Ala
		35					40					45			

Ala	Val	Tyr	Ala	Thr	Trp	Ala	Arg	Gly	Asp	Trp	Gly	Leu	Ile	Leu	Thr
	50					55					60				

Gly	Asn	Val	Gln	Val	Asp	His	Ala	His	Lys	Gly	Asp	Ala	His	Asp	Ile
65					70					75					80

Ser	Pro	Asn	His	Pro	Gly	Thr	Thr	Pro	Glu	Gln	Thr	Val	Thr	Ala	Phe
				85					90					95	

Lys	Ala	Trp	Ala	Asp	Ala	Ala	Arg	Leu	Asn	Gly	Gln	Ser	Lys	Thr	Pro
			100					105					110		

Val	Val	Val	Gln	Ile	Asn	His	Pro	Gly	Arg	Gln	Ser	Pro	Met	Gly	Ala

P03371US0 Sequence listing).txt

115

120

125

Gly Thr Arg Gly Leu Trp Glu Lys Ala Val Ala Pro Ser Pro Val Pro
130 135 140

Leu Val Leu Gly Glu Ala Phe Val Pro Arg Leu Leu Ser Lys Val Leu
145 150 155 160

Phe Gly Thr Pro Arg Glu Leu Thr Val Ala Glu Ile Lys Asp Ile Val
165 170 175

Gln Lys Phe Ala Val Thr Ala Arg Ile Thr Ala Glu Ala Gly Phe Asn
180 185 190

Gly Val Glu Ile His Ala Ala His Gly Tyr Leu Leu Ala Gln Phe Leu
195 200 205

Ser Lys Lys Thr Asn Arg Arg Gly Asp Glu Tyr Gly Gly Ser Ala Glu
210 215 220

Asn Arg Ala Arg Ile Val Gly Glu Ile Ile Lys Glu Cys Arg Arg Gln
225 230 235 240

Val Thr Glu Ala Val Gly Glu Glu Glu Ala Lys Lys Phe Val Val Gly
245 250 255

Ile Lys Leu Asn Ser Ala Asp Trp Gln Ala Gly Arg Asp Gly Lys Glu
260 265 270

Glu Glu Glu Thr Asp Thr Ala Glu Glu Val Leu Lys Gln Ile Glu Leu
275 280 285

Phe Glu Gln Trp Gly Ile Asp Phe Val Glu Val Ser Gly Gly Ser Tyr
290 295 300

Glu Asp Pro Gln Met Ala Asn Gly Pro Lys Pro Glu Lys Ser Glu Arg
305 310 315 320

Thr Met Ala Arg Glu Ala Phe Phe Leu Glu Phe Ala Lys Ile Ile Arg
325 330 335

Thr Lys Phe Pro Lys Leu Pro Leu Met Val Thr Gly Gly Phe Arg Thr
340 345 350

Arg Gln Gly Met Glu Ala Ala Leu Glu Ser Asp Asp Cys Asp Met Ile
355 360 365

P03371US0 Sequence listing).txt

Gly Ile Gly Arg Pro Ala Ile Ile Asn Pro Ser Leu Pro Ala Asn Leu
370 375 380

Ile Leu Asn Pro Glu Val Pro Asp Ala Asp Ala Arg Leu Phe Asp Lys
385 390 395 400

Lys Arg Ala Glu Pro His Trp Ile Val Glu Lys Leu Gly Met Lys Ser
405 410 415

Ile val Gly Ala Gly val Glu val Thr Trp Tyr val Ser Glu Leu Lys
420 425 430

Lys Leu Ala Lys Phe
435

<210> 20
<211> 1412
<212> DNA
<213> Magnaporthe grisea

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P03371US0 Sequence listing).txt

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 <213> Magnaporthe grisea

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P03371US0 Sequence listing).txt

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 <213> Magnaporthe grisea

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 35 40 45

Glu Leu Ser Asn Arg Phe Gly Val Ser Pro Met Cys Thr Tyr Ser Ala
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Asp Asp Gly His Leu Thr Asp Phe His Leu Val His Leu Gly Gln Phe
 65 70 75 80

Ala Leu His Gly Thr Ala Leu Thr Ile Val Glu Ala Thr Ser Val Thr
 85 90 95

Pro Asn Gly Arg Ile Ser Pro Glu Asp Ser Gly Leu Trp Gln Asp Ser
 100 105 110

Gln Ile Ala Pro Leu Arg Arg Ile Val Asp Tyr Val His Ser Gln Gly
 115 120 125

Gln Lys Ile Ala Ile Gln Leu Ala His Ala Gly Arg Lys Ala Ser Thr
 130 135 140

Lys Ala Pro Trp His Asp Ser Phe Thr Pro Ser Gly Glu Tyr Lys Pro
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Arg Glu Gly Leu Gln Val Val Gly Pro Glu Tyr Gly Gly Trp Pro Asp
 165 170 175

Asp Val Trp Ala Pro Ser Ala Ile Pro Phe Ser Glu Asp Phe Pro Asn
 180 185 190

Pro Lys Glu Met Thr Val Glu Glu Ile Glu Gly Leu Val Thr Ser Phe
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Val Asp Ala Ala Lys Arg Ala Ile Glu Ala Gly Val Asp Ile Ile Glu
 210 215 220

P03371US0 Sequence listing).txt

Ile His Gly Ala His Gly Tyr Leu Ile Thr Glu Phe Leu Ser Pro Leu
225 230 235 240

Ser Asn Lys Arg Thr Asp Lys Tyr Gly Gly Ser Phe Glu Asn Arg Thr
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260 265 270

Glu Met Pro Leu Phe Val Arg Ile Ser Ala Thr Glu Trp Met Glu Tyr
275 280 285

Ala Gly Glu Pro Ser Trp Asp Leu Glu Gln Ser Thr Gln Leu Ala Lys
290 295 300

Leu Leu Pro Asp Leu Gly Val Asp Leu Leu Asp Val Ser Ser Gly Gly
305 310 315 320

Asn Ser Val Ala Gln Lys Ile Glu Leu Thr Pro Tyr Tyr Gln Ile Asp
325 330 335

Leu Ala Ala Lys Ile Arg Glu Ala Val Gly Asp Arg Leu Leu Ile Gly
340 345 350

Ala Val Gly Asn Ile Asn Thr Ala Asp Ile Ala Arg Asp Val Val Asp
355 360 365

Glu Gln Gly Ala Glu Lys Val Ala Glu Ala Lys Gln Thr His Asp Thr
370 375 380

Ile Glu Val Val Ser Glu Ser His Gly Gly Lys Thr Lys Ala Asp Leu
385 390 395 400

Val Leu Ile Ala Arg Gln Phe Leu Arg Glu Pro Glu Phe Val Leu Arg
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<211> 1188
<212> DNA
<213> Schizosaccharomyces pombe

P03371US0 Sequence listing).txt

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<212> PRT
<213> Schizosaccharomyces pombe

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<400> 24

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          20           25           30

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Leu Phe Thr Pro Leu Lys Ile Arg Gly Val Glu Phe His Phe Thr Asn
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Arg Met Phe Val Ser Pro Met Cys Thr Tyr Ser Ala Asp Gln Glu Gly
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P03371US0 Sequence listing).txt

His Leu Thr Asp Phe His Leu Val His Leu Gly Ala Met Gly Met Arg
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Arg Ile Ser Pro Asn Asp Ser Gly Leu Trp Phe Thr Met Glu Ser Gln
100 105 110

Met Lys Pro Leu Arg Arg Ile Val Glu Phe Ala His Ser Gln Asn Gln
115 120 125

Lys Ile Gly Ile Gln Leu Ala His Ala Gly Arg Lys Ala Ser Thr Thr
130 135 140

Ala Pro Tyr Arg Gly Tyr Thr Val Ala Thr Glu Ala Gln Gly Gly Trp
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Glu Asn Asp Val Tyr Gly Pro Phe Thr Asn Glu Asp Arg Trp Asp Glu
165 170 175

Asn His Ala Gln Pro His Lys Leu Thr Glu Lys Gln Tyr Asp Glu Leu
180 185 190

Val Asp Lys Phe Val Val Ala Ala Lys Arg Ala Val Glu Ile Gly Phe
195 200 205

Asp Val Ile Glu Ile His Gly Ala His Gly Tyr Leu Ile Ser Ser Thr
210 215 220

Val Ser Pro Ala Phe Thr Thr Asn Asp Arg Asn Asp Lys Tyr Gly Gly
225 230 235 240

Thr Phe Glu Lys Arg Ile Leu Phe Pro Met Glu Val Val His Ser Val
245 250 255

Arg Lys Ala Ile Pro Asp Ser Met Pro Leu Phe Tyr Arg Val Thr Ala
260 265 270

Thr Asp Trp Leu Pro Lys Gly Gln Gly Trp Glu Ile Glu Asp Thr Val
275 280 285

Ala Phe Thr Leu Ala Ala Arg Leu Arg Asp Gly Gly Val Asp Leu Ile
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Asp Val Ser Ser Gly Gly Asn His Lys Asp Gln Arg Ile Glu Val Lys

P03371US0 Sequence listing).txt

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Asp Cys Tyr Gln Val Pro Phe Ala Glu Lys Ile Lys Asp Gln Val Asn
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340 345 350

Thr Ala Asn Glu Ile Leu Glu Ser Gly Lys Ala Asp Val Thr Phe Val
355 360 365

Ala Arg Glu Phe Leu Arg Asn Pro Ser Leu Val Leu Asp Ser Ala Asn
370 375 380

Gln Leu Gly Glu Asn Val Ala Trp Pro Val Gln Tyr Asp Tyr Ala Val
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<213> Colletotrichium trifolii

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<210> 26
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<212> DNA

<213> Colletotrichium trifolii

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<211> 215

<212> PRT

<213> Colletotrichium trifolii

<220>

<221> misc_feature

<222> (187)..(187)

<223> Xaa can be any naturally occurring amino acid

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Pro Thr Leu Phe Lys Pro Leu Arg Ile Arg Asp Leu Thr Ile Asn Asn
 35 40 45

Arg Ile Trp Val Ser Pro Met Cys Gln Tyr Ser Ala Asp Asn Gly His
 50 55 60

Ala Thr Asp Tyr His Leu Val His Leu Gly Gln Phe Ala Leu His Gly
 65 70 75 80

Ala Ala Leu Ser Met Val Glu Ala Thr Ala Val Glu Ala Arg Gly Arg
 85 90 95

P03371US0 Sequence listing).txt

Ile Ser Pro Glu Asp Val Gly Leu Trp Gln Asp Ser Gln Ile Ala Pro
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Leu Lys Arg Ile Val Asp Phe Ile His Ser Gln Asn Gln Val Ala Ala
115 120 125

Ile Gln Leu Ala His Ala Gly Arg Lys Ala Ser Thr Leu Ala Pro Trp
130 135 140

Ile Thr Glu Ala Arg Gly Lys Ala Leu Ala Gln Glu Ser Glu Asn Gly
145 150 155 160

Trp Pro Asp Asp Val Val Ala Pro Ser Ala Ile Pro Tyr Thr Lys Asp
165 170 175

Trp Ala Thr Pro Arg Glu Leu Thr Thr Glu Xaa Ser Arg Val Trp Val
180 185 190

Lys Lys Phe Ala Glu Ser Ala Lys Arg Ser Asn Arg Ala Gly Phe Asp
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Val Ile Glu Ile His Ala Ala
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<210> 28
<211> 803
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<213> Fusarium sporotrichioides

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gagcaactca agagcgacta cgtggaagcg gcaaaacgag ccatccatgc tggtttcgat 720
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P03371US0 Sequence listing).txt

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803

<210> 29
<211> 701
<212> DNA
<213> *Fusarium sporotrichioides*

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<210> 30
<211> 233
<212> PRT
<213> *Fusarium sporotrichioides*

<400> 30

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20 25 30

Thr Lys Leu Phe Thr Pro Ile Thr Ile Arg Gly Val Thr Phe Pro Asn
35 40 45

Arg Leu Phe Leu Ala Pro Leu Cys Gln Tyr Ser Ala Lys Asp Gly Tyr
50 55 60

Ala Thr Asp Trp His Leu Thr His Leu Gly Gly Ile Ile Gln Arg Gly
65 70 75 80

Pro Gly Leu Ser Met Val Glu Ala Thr Ala Val Gln Asn His Gly Arg
Page 34

85

90

95

Ile Thr Pro Gln Asp Val Gly Leu Trp Glu Asp Gly Gln Ile Glu Pro
 100 105 110

Leu Lys Arg Ile Thr Thr Phe Ala His Ser Gln Ser Gln Lys Ile Gly
 115 120 125

Ile Gln Leu Ser His Ala Gly Arg Lys Ala Ser Cys Val Ser Pro Trp
 130 135 140

Leu Ser Val Asn Ala Val Ala Ala Glu Glu Val Gly Gly Trp Pro Asp
 145 150 155 160

Asn Ile Val Ala Pro Ser Ala Ile Ala Gln Glu Asn Gly Val Asn Pro
 165 170 175

Val Pro Lys Ala Phe Thr Lys Glu Asp Ile Glu Gln Leu Lys Ser Asp
 180 185 190

Tyr Val Glu Ala Ala Lys Arg Ala Ile His Ala Gly Phe Asp Val Ile
 195 200 205

Glu Ile His Ala Ala His Gly Tyr Leu Leu His Gln Phe Leu Ser Pro
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Val Ser Asn Gln Arg Thr Asp Glu Tyr
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 <213> Fusarium sporotrichioides

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P03371US0 Sequence listing).txt

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<212> DNA
<213> *Fusarium sporotrichioides*

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tggacgttgg ttccaacaga atcctggtct ggttcgagct tttgctaacg agcttggcgt 480
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caagagttct ttatag 556

<210> 33
<211> 184
<212> PRT
<213> *Fusarium sporotrichioides*

<400> 33

Thr Asp Glu Tyr Gly Gly Ser Phe Glu Asn Arg Ile Arg Val Val Leu
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Glu Ile Leu Asp Leu Ile Arg Ala Ala Ile Pro Glu Thr Thr Pro Val
20 25 30

Leu Val Arg Val Ser Ala Thr Asp Trp Phe Glu Phe Asp Ser Gln Phe
35 40 45

Lys Asp Glu Phe Pro Glu Ser Trp Thr Val Glu Gln Thr Cys Gln Leu
50 55 60

Ala Arg Ile Leu Pro Lys His Gly Val Asp Leu Val Asp Val Ser Ser
65 70 75 80

Gly Gly Ile His Pro Lys Ser Ala Ile Ala Ile Lys Ser Gly Pro Ala
85 90 95

P03371US0 Sequence listing).txt

Tyr Gln Val Asp Leu Ala Lys Gln Val Lys Lys Ala Val Gly Asp Ser
100 105 110

Val Leu Val Ser Ala Val Gly Gly Ile Lys Thr Gly His Leu Ala Glu
115 120 125

Glu Val Leu Gln Ser Gly Ile Asp Ile Val Arg Ala Gly Arg Trp Phe
130 135 140

Gln Gln Asn Pro Gly Leu Val Arg Ala Phe Ala Asn Glu Leu Gly Val
145 150 155 160

Glu Val Lys Met Ala Asn Gln Ile Asp Trp Ser Phe Lys Gly Arg Gly
165 170 175

Lys Lys Val Asn Lys Ser Ser Leu
180

<210> 34
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<212> DNA
<213> Fusarium sporotrichioides

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acacttgatca agacctatct attattttcaa aaatcagcaa tatggctgag acaatgccta 180
agtgtgaggc aaatggccat cacaaaatca tcatcaataa ggaagctccg aatgttcctt 240
tctatactcc agtgcaagat ccaccagcag gaacgtctta cgatgttcag cctgaaggaa 300
gcctattctc tcttattaaa ataagaaacc tgactcttca aaaccggatt tttgtctccc 360
caatgtgtca atattcagca aaggatggtg tcatgacccc ctggcacaaa caacacctgg 420
gcagcttcgc agcacgaggt ccgggtctca ttgtcacaga agtcaacgca gtttcaccag 480
agggacgaat cagtcctgag gatgcaggca tctacgatga tgggcagctt ggacctctcc 540
gggatattgt ggactttgta cacagccagg gcgccaagat tgctattcag ataggtcatg 600
ctgggagaaa agcgagcaca gtcgtaccgt ggctggaccg caagaacact gcttttta 657

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<211> 161
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<213> Fusarium sporotrichioides

<400> 35
Met Pro Lys Cys Glu Ala Asn Gly His His Lys Ile Ile Ile Asn Lys
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P03371US0 Sequence listing).txt

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20 25 30

Gly Thr Ser Tyr Asp Val Gln Pro Glu Gly Ser Leu Phe Ser Leu Ile
35 40 45

Lys Ile Arg Asn Leu Thr Leu Gln Asn Arg Ile Phe Val Ser Pro Met
50 55 60

Cys Gln Tyr Ser Ala Lys Asp Gly Val Met Thr Pro Trp His Lys Gln
65 70 75 80

His Leu Gly Ser Phe Ala Ala Arg Gly Pro Gly Leu Ile Val Thr Glu
85 90 95

Val Asn Ala Val Ser Pro Glu Gly Arg Ile Ser Pro Glu Asp Ala Gly
100 105 110

Ile Tyr Asp Asp Gly Gln Leu Gly Pro Leu Arg Asp Ile Val Asp Phe
115 120 125

Val His Ser Gln Gly Ala Lys Ile Ala Ile Gln Ile Gly His Ala Gly
130 135 140

Arg Lys Ala Ser Thr Val Val Pro Trp Leu Asp Arg Lys Asn Thr Ala
145 150 155 160

Phe

<210> 36
<211> 744
<212> DNA
<213> Fusarium graminearum

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cgaggcgtca cattcccaaa ccgtctcttt cttgcccctc tctgtcaata ctccgcaaaa 180
gatggatatg ctactgattg gcacttgact catctcggag gcattatcca acgaggcccg 240
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gttggtctct gggaagatgg acaaatcgag ccctttgaag cgcatacta cttttgcccc 360
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wccgcgctgg ttttgatgtc atcgagatcc atgcagctca tggatacttg cttcaccagt	660
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tcagagtcgt cttggagatc attg	744

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cgaggcgtca cattcccaaa ccgtctcttt cttgcccctc tctgtcaata ctccgcaaaa	180
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gttggtctct gggaagatgg acaaatcgag cccttgaagc gcatcactac ttttgccac	360
agccaaagcc agaagattgg tattcagctc tcgcacgctg gtcgtaaggc tagttgtgta	420
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cgcgctgggt ttgatgtcat cgagatccat gcagctcatg gatacttgct tcaccagttc	660
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 <211> 247
 <212> PRT
 <213> Fusarium graminearum

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P03371US0 Sequence listing).txt

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Thr Pro Ala Gln Asp Xaa Pro Ala Gly Thr Gln Thr Ser Gly Ser Thr
20 25 30

Lys Val Phe Thr Xaa Ile Thr Ile Arg Gly Val Thr Phe Pro Asn Arg
35 40 45

Leu Phe Leu Ala Pro Leu Cys Gln Tyr Ser Ala Lys Asp Gly Tyr Ala
50 55 60

Thr Asp Trp His Leu Thr His Leu Gly Gly Ile Ile Gln Arg Gly Pro
65 70 75 80

Gly Leu Ser Met Val Glu Ala Thr Ala Val Gln Asn His Gly Arg Ile
85 90 95

Thr Pro Gln Asp Val Gly Leu Trp Glu Asp Gly Gln Ile Glu Pro Leu
100 105 110

Lys Arg Ile Thr Thr Phe Ala His Ser Gln Ser Gln Lys Ile Gly Ile
115 120 125

Gln Leu Ser His Ala Gly Arg Lys Ala Ser Cys Val Ser Pro Trp Leu
130 135 140

Ser Ile Asn Ala Val Ala Ala Lys Glu Val Gly Gly Trp Pro Asp Asn
145 150 155 160

Ile Val Ala Pro Ser Ala Ile Ala Gln Glu Ala Gly Val Asn Pro Val
165 170 175

Pro Lys Ala Phe Thr Lys Glu Asp Ile Glu Glu Leu Lys Asn Asp Phe
180 185 190

Leu Ala Ala Xaa Lys Arg Ala Xaa Arg Ala Gly Phe Asp Val Ile Glu
Page 40

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Ile His Ala Ala His Gly Tyr Xaa Leu His Gln Phe Leu Ser Pro Val
210 215 220

Ser Asn Gln Arg Thr Asp Glu Tyr Gly Gly Ser Phe Glu Asn Arg Ile
225 230 235 240

Arg Val Val Leu Glu Ile Ile
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<210> 39
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<213> Mycosphaerella graminicola

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ggagatgtcg ttggatgata tcgaggcttt caagaaggcg tttggagagg cggtaagcg 480
ggcattgaag gctggatttg atgttattga gattcacaat gtcacggat acctcctcca 540
cgaattcatc tgcctgagag caacaccagg accgacaagt acgggcgga gctgggaaaa 600
ccgcactcgt ctgacaatgg aaagtcgtcg acctgtgccg cagcatt 647

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<211> 215
<212> PRT
<213> Mycosphaerella graminicola

<400> 40

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Leu Cys Gln Tyr Ser Ala Pro Asp Gly His Tyr Thr Met Trp His His
20 25 30

Thr His Met Gly Gly Ile Ile Gln Arg Gly Pro Gly Leu Thr Cys Val
35 40 45

P03371US0 Sequence listing).txt

Glu Ala Thr Ala Val Thr Pro Gln Gly Arg Ile Thr Pro Glu Asp Val
50 55 60

Gly Ile Trp Gln Asp Ser Gln Ile Glu Pro Leu Ala Lys Val Val Glu
65 70 75 80

Phe Ala His Ser Gln Asn Gln Lys Ile Met Ile Gln Leu Ala His Ala
85 90 95

Gly Arg Lys Ala Ser Thr Val Ala Pro Trp Leu Ser Gly Gly Asp Val
100 105 110

Ala Gly Glu Asp Val Asn Gly Trp Pro Gln Asp Val Trp Ala Pro Ser
115 120 125

Ala Ile Pro Trp Asn Glu Lys His Ala Val Pro Lys Glu Met Ser Leu
130 135 140

Asp Asp Ile Glu Ala Phe Lys Lys Ala Phe Gly Glu Ala Val Lys Arg
145 150 155 160

Ala Leu Lys Ala Gly Phe Asp Val Ile Glu Ile His Asn Ala His Gly
165 170 175

Tyr Leu Leu His Glu Phe Ile Cys Leu Arg Ala Thr Pro Gly Pro Thr
180 185 190

Ser Thr Gly Gly Ser Trp Glu Asn Arg Thr Arg Leu Thr Met Glu Ser
195 200 205

Arg Arg Pro Cys Pro Gln His
210 215

<210> 41
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<212> DNA
<213> Mycosphaerella graminicola

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actatgcgcc gagagagttg tcggtcagag agatcaagga gatggtccaa gactgggcga 180
cagcagcgaa aagggcgggtg aaagcgggcg tggatgtaat cgaaatccac ggcgcgcatg 240
ggtacctcat ccacgaattc ctctcaccca ttaccaaccg ccggacagat tcttacggcg 300
gttctttcga aaaccgtacc cgtctactca ttgaaatcgt aacagccgtc cgagccgcga 360
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P03371US0 Sequence listing).txt

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 tggccgactt gggcgttgat ctcctcgacg tgtcttccgg tgggaatcat cctcagcaga 540
 aaatcaacat gttcaacacc 560

<210> 42
 <211> 186
 <212> PRT
 <213> Mycosphaerella graminicola

<400> 42

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Val Val Gly Pro Ser Gly Gly Glu Asp Phe Thr Trp Asp Glu Arg Ser
 20 25 30

Ser Ser Asp Pro Ser Gly Gly Tyr Tyr Ala Pro Arg Glu Leu Ser Val
 35 40 45

Arg Glu Ile Lys Glu Met Val Gln Asp Trp Ala Thr Ala Ala Lys Arg
 50 55 60

Ala Val Lys Ala Gly Val Asp Val Ile Glu Ile His Gly Ala His Gly
 65 70 75 80

Tyr Leu Ile His Glu Phe Leu Ser Pro Ile Thr Asn Arg Arg Thr Asp
 85 90 95

Ser Tyr Gly Gly Ser Phe Glu Asn Arg Thr Arg Leu Leu Ile Glu Ile
 100 105 110

Val Thr Ala Val Arg Ala Ala Met Pro Ser Ser Met Pro Leu Phe Leu
 115 120 125

Arg Leu Ser Ser Thr Glu Trp Met Glu Asp Thr Asp Ile Gly Lys Lys
 130 135 140

Phe Gly Ser Trp Asp Val Glu Ser Thr Ile Lys Ile Ser Lys Ile Leu
 145 150 155 160

Ala Asp Leu Gly Val Asp Leu Leu Asp Val Ser Ser Gly Gly Asn His
 165 170 175

Pro Gln Gln Lys Ile Asn Met Phe Asn Thr
 180 185

P03371US0 Sequence listing).txt

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 <212> DNA
 <213> Magnaporthe grisea

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<210> 44
 <211> 418
 <212> PRT
 <213> Magnaporthe grisea

<400> 44
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 Gly Thr Pro Leu Lys Tyr Pro Val Ser Gly Arg Ser Ala Pro Asn Arg
 20 25 30

P03371US0 Sequence listing).txt

Phe Leu Asn Ala Ala Met Ser Glu Gly Leu Ala Thr Phe Asp Glu Ala
35 40 45

Asp Pro Ser Lys Arg Gly Ile Pro Thr Glu Gln Leu Val Gln Leu Tyr
50 55 60

Arg Arg Trp Gly Gln Gly Glu Trp Gly Gln Ile Gln Thr Gly Asn Val
65 70 75 80

Met Ile Asp Pro Glu His Leu Glu Ala Pro Gly Asn Met Val Val Pro
85 90 95

Arg Asp Ala Glu Pro Ser Gly Glu Arg Phe Asp Met Phe Ser Lys Leu
100 105 110

Ala Ala Ala Ala Lys Glu His Gly Ser Leu Ile Val Ala Gln Val Gly
115 120 125

His Pro Gly Arg Gln Ala Arg Gly Ser Val Gln Gln His Pro Ile Ser
130 135 140

Ala Ser Asp Val Gln Leu Lys Gln Glu Met Phe Gly Ser Lys Phe Gly
145 150 155 160

Val Pro Arg Pro Ala Thr Lys Glu Asp Ile Lys Ala Val Ile Glu Gly
165 170 175

Phe Ala His Thr Ala Glu Tyr Leu Glu Lys Ala Gly Phe Asp Gly Ile
180 185 190

Glu Leu His Ala Ala His Gly Tyr Leu Leu Ala Gln Phe Leu Ser Glu
195 200 205

Thr Thr Asn Gln Arg Thr Asp Glu Tyr Gly Gly Ser Leu Glu Asn Arg
210 215 220

Met Arg Leu Ile Leu Glu Val Thr Ala Glu Val Arg Arg Arg Thr Ser
225 230 235 240

Lys Asn Phe Ile Leu Gly Ile Lys Ile Asn Ser Val Glu Phe Gln Glu
245 250 255

Lys Gly Phe Lys Pro Glu Glu Ala Val Gln Leu Cys Glu Ala Leu Glu
260 265 270

Ala Ala Gly Met Asp Phe Val Glu Thr Ser Gly Gly Thr Tyr Glu Ser
275 280 285

P03371US0 Sequence listing).txt

Phe Gly Phe Ala His Arg Lys Glu Ser Ser Arg Lys Arg Glu Asn Tyr
290 295 300

Phe Ile Glu Phe Ala Glu Val Ile Arg Lys Ala Val Lys His Met Val
305 310 315 320

Val Tyr Thr Thr Gly Gly Phe Lys Thr Val Gly Ala Met Val Asp Ala
325 330 335

Leu Gln Gly Val Asp Gly Ile Gly Ile Gly Arg Ala Ala Gly Ser Glu
340 345 350

Pro Asp Leu Ala Lys Asp Ile Ile Ala Gly Lys Val Ser Ser Ile Ile
355 360 365

Lys Tyr Ala Met Gly Glu Asp Glu Phe Val Leu Gln Leu Thr Ala Cys
370 375 380

Ser Ala Gln Ile Arg Leu Met Ala Lys Gly Glu Glu Pro Phe Asp Ile
385 390 395 400

Ser Asn Ala Asp Glu Val Ala Arg Val Thr Gln Leu Met Ala Glu Gly
405 410 415

Lys Val

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<212> DNA
<213> Aspergillus fumigatus

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tgacaagcac cttatggctt tcgatggaaa cagctattcc ttctactggt aaaaatagga 180
taccagaggc tacaatcaat acaccctcga tagaggctgt cgaatgtggc caactggcaa 240
cgctgcggtt agtcatcgtc ggagactttc tgggattcat tttcttccga gtctccgcct 300
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tacctccgta cctgggtggt cgacgtcatt gccacgtttc gacccaaggg cagacgcat 480
gtcgcggagc gatcgccgag atatgcctcg aatttgccg attcggcatc cagtttccag 540
tgcccttccc cgaatgactg tctccactat tcggcaagat tgtaaataca gcctgaagaa 600

P03371US0 Sequence listing).txt

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taataaagat cagcaccga ggagttctta 690

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<210> 47
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<400> 47
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<210> 48
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<220>
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<400> 48
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<210> 49
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<220>
<223> primer

<400> 49
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<210> 50
<211> 26
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<400> 50

ccgtcctggg cggagtattg gcagag 26

<210> 51
 <211> 31
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<220>
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<400> 51
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<210> 52
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<220>
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<400> 52
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<210> 53
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<400> 53
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<400> 54
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<210> 55
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<400> 55
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P03371US0 Sequence listing).txt

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 <400> 57
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 <400> 58
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 <210> 59
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 <400> 59
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P03371US0 Sequence listing).txt

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<223> primer

<400> 61
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<223> primer

<400> 62
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<400> 63
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<400> 64
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<400> 65
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P03371U50 Sequence listing).txt

<223> primer

<400> 66
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<400> 67
cagaccaatg gccagaaga 19

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<212> DNA
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<400> 68
agatgggcga tgtggtagtc 20

<210> 69
<211> 20
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<223> primer

<400> 69
gccgcttaca gggaatgata 20

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<212> DNA
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<220>
<223> primer

<400> 70
atggctcaat ctgcgagtct 20

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<400> 71

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<211> 20		
<212> DNA		
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<223> primer		
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<210> 75		
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<223> primer		
<400> 75		
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<210> 76		
<211> 20		
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P03371US0 Sequence listing).txt

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<220>
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<210> 78
<211> 24
<212> DNA
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<220>
<223> primer

<400> 78
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<210> 79
<211> 18
<212> DNA
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<220>
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<400> 79
tccgtggcgt caccttcc                        18

<210> 80
<211> 21
<212> DNA
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<213> Artificial sequence

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P03371US0 Sequence listing).txt

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P03371US0 Sequence listing).txt

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P03371US0 Sequence listing).txt

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<211> 1326

<212> DNA

<213> Fusarium graminearum

<400> 82

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tacttcaacc ctgagcaact tcctgcacca ggtctcggtg taaacgggtc caataatact	180
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P03371US0 Sequence listing).txt

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cactacggcg gactggccca acgtggccct	360
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 <212> PRT
 <213> *Fusarium graminearum*

<400> 83

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Ser Gln Asn Gly Thr Glu Pro Gln Asp Ala Asn Lys Glu Val Val Gln
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Asn Val Ala Ala Lys Gly Val Gln Tyr Phe Asn Pro Glu Gln Leu Pro
35 40 45

Ala Pro Gly Leu Gly Ile Asn Gly Pro Asn Asn Thr Leu Pro Lys Val
50 55 60

Phe Thr Pro Ile Lys Ile Arg Gly Met Thr Met Pro Asn Arg Ile Trp
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65              70              75              80
Val Ser Pro Met Cys Gln Tyr Ser Ala Arg Asp Gly Phe Gln Gln Pro
                85                90                95

Trp His Phe Ala His Tyr Gly Gly Leu Ala Gln Arg Gly Pro Gly Leu
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Ile Met Leu Glu Ala Thr Ala Val Gln Ala Arg Gly Arg Ile Thr Pro
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Glu Asp Ser Gly Ile Trp Leu Asp Ser His Val Glu Gly Leu Arg Lys
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His Val Glu Phe Ala His Ala Asn Asn Ser Leu Ile Gly Ile Gln Ile
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Gly His Ala Gly Arg Lys Ala Ser Cys Val Ala Pro Trp Leu Asp Ala
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Gly Leu Ala Ala Glu Lys Ala Ala Gly Gly Trp Pro Asp Asp Val Val
                180                185                190

Gly Pro Ser Asn Glu Pro Phe Ala Pro Gly Tyr Pro Thr Pro Arg Ala
                195                200                205

Ile Thr Leu Glu Glu Ile Glu Gln Leu Lys Glu Asp Phe Val Ser Gly
                210                215                220

Val Arg Arg Ala Val Glu Ala Gly Phe Asp Thr Ile Asp Phe His Phe
                225                230                235                240

Ala His Gly Tyr Leu Val Ser Ser Phe Leu Ser Pro Ala Thr Asn Lys
                245                250                255

Arg Thr Asp Lys Tyr Gly Gly Ser Phe Glu Asn Arg Val Arg Leu Ala
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Leu Glu Ile Val Glu Ala Ala Arg Ala Val Met Pro Glu Asp Met Pro
                275                280                285

Leu Phe Thr Arg Ile Ser Gly Thr Asp Trp Leu Glu Asn Asn Pro Glu
                290                295                300

Tyr Glu Gly Glu Thr Trp Thr Leu Glu Gln Ser Ile Lys Leu Ala His
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P03371US0 Sequence listing).txt

Gln Leu Ala Asp Arg Gly Val Asp Val Leu Asp Val Ser Ser Gly Gly
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Ile His Lys Met Gln Lys Val Ala Ala Gly Pro Gly Tyr Gln Ala Pro
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Leu Ala Lys Ala Ile Lys Lys Ser Val Gly Asp Lys Met Leu Ile Ser
355 360 365

Thr Val Gly Ser Ile Lys Ile Gly Thr Leu Ala Glu Glu Ile Ile Ala
370 375 380

Gly Gly Glu Asp Asp Thr Pro Leu Asp Leu Val Ala Ser Gly Arg Leu
385 390 395 400

Phe Gln Lys Asn Thr Gly Leu Val Trp Ser Trp Ala Asp Asp Leu Asn
405 410 415

Thr Ser Ile Gln Ile Ala His Gln Ile Ala Trp Gly Phe Gly Gly Arg
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Ala Lys Lys Asn Ala Pro Lys Leu Val Leu
435 440

<210> 84
<211> 1350
<212> DNA
<213> Ustilago maydis

<400> 84
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P03371U50 Sequence listing).txt

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<210> 85
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 <212> PRT
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<400> 85

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His Pro Pro Pro Gly Ser Val Pro Glu Ser Ile Leu Pro Glu Gly Val
 35 40 45

Lys Lys Pro Ala Leu Phe Gln Thr Leu Thr Leu Pro Phe Ala Ala Pro
 50 55 60

Glu Gln Ala Gly Lys Met Thr Phe Lys Asn Arg Ile Ile Val Ser Pro
 65 70 75 80

Met Cys Gln Tyr Ser Ala Asn Asn Gly Leu Pro Thr Pro Tyr His Ile
 85 90 95

Ala His Leu Gly Ser Phe Ala Leu His Gly Val Gly Asn Val Met Val
 100 105 110

Glu Ala Ser Gly Val Glu Pro Glu Gly Arg Ile Thr Pro Gln Asp Leu
 115 120 125

Gly Ile Trp Ser Glu Gln His Arg Asp Ala His Lys Ala Leu Val Ser
 130 135 140

P03371US0 Sequence listing).txt

Val Leu Lys Ser Phe Thr Asp Gly Leu Gly Val Gly Leu Gln Leu Ala
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His Ala Gly Arg Lys Ala Ser Asp Trp Ser Pro Phe Tyr Arg Gly Glu
165 170 175

Lys Lys Gln Lys Phe Val Thr Gln Glu Glu Gly Gly Trp Pro Asp Arg
180 185 190

Val Val Ala Pro Ser Ala Ile Ala Tyr Ala Gln Gly His Val Thr Pro
195 200 205

Arg Ala Leu Thr Thr Glu Asp Ile Asn Lys Leu Gln Asp Lys Phe Val
210 215 220

Gln Ser Ala Arg Trp Ala Phe Glu Ala Gly Tyr Asp Tyr Val Glu Leu
225 230 235 240

His Ser Ala His Gly Tyr Leu Met His Ser Phe Leu Ser Pro Leu Thr
245 250 255

Asn Gln Arg Thr Asp Glu Tyr Gly Gly Ser Leu Glu Asn Arg Ala Arg
260 265 270

Phe Leu Leu Asn Val Ala Arg Arg Ile Arg Gln Glu Phe Pro Asn Lys
275 280 285

Gly Leu Trp Val Arg Val Ser Ser Thr Asp Trp Ala Asp Gln Ala His
290 295 300

Gln Ala Asp Ser Trp Thr Val Asp Gln Thr Val Glu Leu Ala Lys Met
305 310 315 320

Leu Gln Glu Ala Arg Val Asp Leu Leu Asp Val Ser Ser Gly Gly Leu
325 330 335

Val Pro Phe Gln Lys Ile Thr Val Gly Ala Gly Tyr Gln Leu Phe Gly
340 345 350

Ala Lys Ala Val Arg Asp Ala Leu Ala Lys Ile Glu Pro Asp Ala Ser
355 360 365

Lys Arg Met Leu Val Gly Ala Val Gly Met Met Glu Gly Ser Tyr Asp
370 375 380

Ser Pro Asn Gly Gln Asp Arg Ser Gln Ile Gly Lys Leu Ala Glu Gln

P03371US0 Sequence listing).txt

385 390 395 400

Ser Ile Gln Ser Gly Glu Cys Asp Ala Val Leu Leu Ala Arg Gly Leu
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Met Ser Tyr Pro Ser Trp Thr Glu Asp Ala Ser Val Ala Leu Met Gly
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Thr Arg Ala Ala Gly Asn Pro Gln Tyr His Arg Val His Val Ala Lys
435 440 445

Lys

<210> 86
<211> 363
<212> PRT
<213> Pseudomonas putida

<400> 86

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Asn Arg Ile Ala Ile Pro Pro Met Cys Gln Tyr Met Ala Glu Asp Gly
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Leu Ile Asn Asp Trp His Gln Val His Tyr Ala Ser Met Ala Arg Gly
35 40 45

Gly Ala Gly Leu Leu Val Val Glu Ala Thr Ala Val Ala Pro Glu Gly
50 55 60

Arg Ile Thr Pro Gly Cys Ala Gly Ile Trp Ser Asp Ala His Ala Gln
65 70 75 80

Ala Phe Val Pro Val Val Gln Ala Ile Lys Ala Ala Gly Ser Val Pro
85 90 95

Gly Ile Gln Ile Ala His Ala Gly Arg Lys Ala Ser Ala Asn Arg Pro
100 105 110

Trp Glu Gly Asp Asp His Ile Gly Ala Asp Asp Ala Arg Gly Trp Glu
115 120 125

Thr Ile Ala Pro Ser Ala Ile Ala Phe Gly Ala His Leu Pro Asn Val
130 135 140

Pro Arg Ala Met Thr Leu Asp Asp Ile Ala Arg Val Lys Gln Asp Phe
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Val Asp Ala Ala Arg Arg Ala Arg Asp Ala Gly Phe Glu Trp Ile Glu
165 170 175

Leu His Phe Ala His Gly Tyr Leu Gly Gln Ser Phe Phe Ser Glu His
180 185 190

Ser Asn Lys Arg Thr Asp Ala Tyr Gly Gly Ser Phe Asp Asn Arg Ser
195 200 205

Arg Phe Leu Leu Glu Thr Leu Ala Ala Val Arg Glu Val Trp Pro Glu
210 215 220

Asn Leu Pro Leu Thr Ala Arg Phe Gly Val Leu Glu Tyr Asp Gly Arg
225 230 235 240

Asp Glu Gln Thr Leu Glu Glu Ser Ile Glu Leu Ala Arg Arg Phe Lys
245 250 255

Ala Gly Gly Leu Asp Leu Leu Ser Val Ser Val Gly Phe Thr Ile Pro
260 265 270

Glu Thr Asn Ile Pro Trp Gly Pro Ala Phe Met Gly Pro Ile Ala Glu
275 280 285

Arg Val Arg Arg Glu Ala Lys Leu Pro Val Thr Ser Ala Trp Gly Phe
290 295 300

Gly Thr Pro Gln Leu Ala Glu Ala Ala Leu Gln Ala Asn Gln Leu Asp
305 310 315 320

Leu Val Ser Val Gly Arg Ala His Leu Ala Asp Pro His Trp Ala Tyr
325 330 335

Phe Ala Ala Lys Glu Leu Gly Val Glu Lys Ala Ser Trp Thr Leu Pro
340 345 350

Ala Pro Tyr Ala His Trp Leu Glu Arg Tyr Arg
355 360

<210> 87
<211> 359
<212> PRT
<213> Streptomyces coelicolor

<400> 87

Met Ser Ala Leu Phe Glu Pro Phe Arg Leu Arg Asp Thr Thr Ile Pro
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P03371US0 Sequence listing).txt

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	Met	Cys	Gln
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		Ala	Ala
		30	Pro
			Glu
Gly	Pro	Ser	Ala
35	Gly	Val	Pro
	40	Gly	Asp
		Trp	His
		Phe	Ala
		45	His
			Tyr
			Gly
Ala	Arg	Ala	Val
50	Gly	Gly	Thr
	55	Gly	Leu
		Ile	Val
		60	Glu
			Ala
			Thr
			Gly
Val	Ser	Pro	Glu
65	Gly	Arg	Ile
	70	Ser	Pro
		Gln	Asp
		75	Leu
			Gly
			Leu
			Trp
			Asn
			80
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		Phe	Arg
		Arg	Ile
		90	Thr
			Gly
			Phe
			Leu
			Arg
			95
			Ser
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	Gln	Leu	Ala
	105	His	Ala
		Gly	Arg
		110	Lys
			Ala
Ser	Thr	Ala	Gln
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	Gly	Gly	Ala
	120	Pro	Val
		Gly	Ala
		125	Asp
			Ala
Tyr	Gly	Trp	Gln
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	135	Pro	Ser
		Ala	Leu
		140	Ala
			Phe
			Asp
			Glu
			Arg
His	Pro	Val	Pro
145	Thr	Glu	Leu
	150	Thr	Val
		Pro	Gln
		155	Ile
			Gln
			Glu
			Ala
			Val
			160
Gly	Arg	Phe	Ala
	165	Asp	Ala
		Ala	Arg
		Arg	Ala
		170	Leu
			Ala
			Ala
			Gly
			Phe
			Glu
			175
Ile	Ala	Glu	Ile
180	His	Gly	Ala
	His	Gly	Tyr
	185	Leu	Ile
		His	Glu
		190	Phe
			Leu
Ser	Pro	His	Ser
195	Asn	Gln	Arg
	200	Thr	Asp
		Ala	Tyr
		Gly	Gly
		205	Ser
			Tyr
			Ala
Asn	Arg	Thr	Arg
210	Phe	Ala	Leu
	215	Glu	Val
		Val	Asp
		220	Ala
			Val
			Arg
			Glu
			Val
Trp	Pro	Asp	Asp
225	Lys	Pro	Leu
	230	Phe	Phe
		Arg	Val
		235	Ser
			Ala
			Thr
			Asp
			Trp
			240
Leu	Glu	Glu	Gly
	245	Trp	Thr
		Pro	Asp
		250	Asp
			Thr
			Val
			Arg
			Phe
			Ala
			Arg
			255

P03371US0 Sequence listing).txt

Asp Leu Glu Ala His Gly Ile Asp Leu Leu Asp Val Ser Thr Gly Gly
260 265 270

Asn Val Pro Arg Val Arg Ile Pro Thr Gly Pro Gly Tyr Gln Val Pro
275 280 285

Phe Ala Ala Arg Val Lys Ala Gly Ser Thr Leu Pro Val Ala Ala Val
290 295 300

Gly Leu Ile Thr Glu Pro Gly Gln Ala Glu Lys Ile Leu Ala Asn Gly
305 310 315 320

Glu Ala Asp Ala Val Leu Leu Gly Arg Glu Leu Leu Arg Asn Pro Ser
325 330 335

Trp Ala Gln His Ala Ala Arg Glu Leu Gly Val Asp Ala Arg Met Pro
340 345 350

Asp Gln Tyr Gly Trp Gly Met
355

<210> 88
<211> 370
<212> PRT
<213> Deinococcus radiodurans

<400> 88

Met Thr Val Ser Ser Ala Ala Ala Pro Gln Pro Ala Ser Pro Ala Ala
1 5 10 15

Pro Leu Leu Phe Thr Pro Leu Lys Leu Arg Ser Leu Glu Leu Pro Asn
20 25 30

Arg Val Val Val Ser Pro Met Cys Thr Tyr Ser Ala Thr Asp Gly Val
35 40 45

Ala Asn Glu Phe His Leu Val His Leu Gly Gln Tyr Ala Leu Gly Gly
50 55 60

Ala Gly Leu Ile Leu Ala Glu Ala Thr Ala Val Ser Pro Glu Gly Arg
65 70 75 80

Ile Thr Pro Glu Asp Leu Gly Leu Trp Asp Asp Arg Gln Ile Val Pro
85 90 95

Leu Gly His Ile Thr Asp Phe Val His Gln His Gly Gly His Ile Gly
100 105 110

P03371US0 Sequence listing).txt

Val Gln Leu Ala His Ala Gly Arg Lys Ala Ser Thr Tyr Ala Pro Trp
115 120 125

Arg Gly Lys Gly Ala Val Pro Ala Glu Leu Gly Gly Trp Gln Val Ile
130 135 140

Gly Pro Asp Glu Asn Ser Phe His Asp Leu Phe Pro Thr Pro Ala Met
145 150 155 160

Met Gly Ala Asp Glu Leu Arg Gly Val Val Asp Ala Phe Ser Ala Ala
165 170 175

Ala Arg Arg Ala Gln Val Ala Gly Phe Asp Ala Val Glu Val His Ala
180 185 190

Ala His Gly Tyr Leu Leu His Gln Phe Leu Ser Pro Leu Ala Asn Thr
195 200 205

Arg Thr Asp Asp Tyr Gly Gly Ser Phe Glu Asn Arg Thr Arg Leu Leu
210 215 220

Leu Glu Val Val Arg Ala Val Arg His Val Trp Pro Ala His Leu Pro
225 230 235 240

Leu Phe Val Arg Leu Ser Ala Thr Asp Trp Ala Glu Gly Gly Trp Asp
245 250 255

Leu Glu Gln Thr Val Gln Leu Ser Lys Leu Leu Lys Tyr Glu Gly Val
260 265 270

Asp Val Leu Asp Ile Ser Ser Gly Gly Leu Thr Ala Ala Gln Gln Ile
275 280 285

Glu Val Gly Pro Gly Tyr Gln Val Pro Phe Ala Ala Ala Val Ser Arg
290 295 300

Ala Glu Thr Glu Ile Ser Val Met Ala Val Gly Leu Ile Glu Thr Gly
305 310 315 320

Ala Gln Ala Glu Ala Ile Leu Gln Ala Gly Asp Ala Asp Leu Ile Ala
325 330 335

Leu Gly Arg Pro Phe Leu Arg Asp Pro His Trp Ala Gln Arg Ala Ala
340 345 350

Arg Glu Leu Gly Leu Arg Pro Val Ser Ile Asp Gln Tyr Ala Arg Ala
355 360 365

P03371US0 Sequence listing).txt

Gly Trp
370

<210> 89
<211> 773
<212> PRT
<213> Azoarcus evansii

<400> 89

Met Arg Ile Val Cys Ile Gly Gly Gly Pro Ala Gly Leu Tyr Phe Ala
1 5 10 15

Ile Leu Met Lys Lys Leu Asn Pro Ala His Glu Ile Arg Val Ile Glu
20 25 30

Arg Asn Arg Pro Tyr Asp Thr Phe Gly Trp Gly Val Val Phe Ser Asp
35 40 45

Ala Thr Met Asp Asn Met Arg Glu Trp Asp Ser Glu Thr Ala Asp Ala
50 55 60

Ile Gln Val Ala Phe Asn His Trp Asp Asp Ile Glu Leu His Phe Lys
65 70 75 80

Gly Arg Thr Ile Arg Ser Gly Gly His Gly Phe Val Gly Ile Gly Arg
85 90 95

Lys Met Met Leu Asn Ile Leu Gln Ala Arg Cys Glu Glu Leu Gly Val
100 105 110

Glu Leu Val Phe Asp Arg Glu Val Glu Ser Asp Ala Glu Phe Pro Asp
115 120 125

Ala Asp Leu Val Ile Ala Ser Asp Gly Ile Asn Ser Arg Ile Arg Asn
130 135 140

Lys Tyr Ala Glu Val Phe Lys Pro Asp Ile Val Thr Arg Pro Asn Arg
145 150 155 160

Tyr Ile Trp Leu Gly Thr Thr Lys Leu Phe Asp Ala Phe Thr Phe Phe
165 170 175

Phe Glu Lys Thr Glu His Gly Trp Phe Gln Ala His Ile Tyr Lys Phe
180 185 190

Asp Asp Lys Thr Thr Thr Phe Ile Val Glu Cys Pro Glu His Val Trp
195 200 205

P03371U50 Sequence listing).txt

Lys Ala His Gly Leu Asp Thr Ala Asp Gln Glu Gln Ser Ile Ala Phe
210 215 220

Cys Glu Gln Leu Phe Gly Lys His Leu Asp Gly His Arg Leu Met Thr
225 230 235 240

Asn Ser Arg His Leu Arg Gly Ser Ala Trp Leu Asn Phe Gln Arg Val
245 250 255

Lys Cys Glu Gln Trp His His Tyr Asn Gly Lys Ser His Val Val Leu
260 265 270

Met Gly Asp Ala Val His Thr Ala His Phe Ala Ile Gly Ser Gly Thr
275 280 285

Lys Leu Ala Leu Glu Asp Ala Ile Glu Leu Thr Arg Leu Phe Arg Asp
290 295 300

Glu Gly Asp Thr Arg Glu His Ile Pro Ala Val Leu Glu Arg Tyr Gln
305 310 315 320

Ala Ala Arg Asn Ile Asp Val Leu Arg Leu Gln Asn Ala Ala Trp Asn
325 330 335

Ala Met Glu Trp Phe Glu Val Cys Gly Ala Arg Tyr Cys Asp Thr Leu
340 345 350

Glu Pro Glu Gln Phe Met Tyr Ser Met Leu Thr Arg Ser Gln Arg Ile
355 360 365

Ser His Glu Asn Leu Arg Leu Arg Asp Ala Gly Trp Leu Glu Gly Tyr
370 375 380

Glu Arg Trp Leu Ala Arg Lys Ala Gly Met Thr Val Arg Asp Asp Glu
385 390 395 400

Thr Pro Pro Pro Pro Met Phe Thr Pro Phe Lys Leu Arg Gly Leu Thr
405 410 415

Leu Ala Asn Arg Ile Val Met Ser Pro Met Ala Met Tyr Ser Ala Glu
420 425 430

Asp Gly Ala Pro Thr Asp Phe His Leu Val His Phe Gly Ser Arg Ala
435 440 445

Leu Gly Gly Ala Gly Leu Leu Tyr Thr Glu Met Thr Cys Val Ser Pro
450 455 460

P03371US0 Sequence listing).txt

Asp Ala Arg Ile Thr Pro Gly Cys Ala Gly Met Tyr Lys Pro Glu His
465 470 475 480

Val Asn Ala Trp Lys Arg Ile Val Asp Phe Val His Gly Asn Ser Asp
485 490 495

Ala Lys Ile Gly Met Gln Leu Gly His Ala Gly Arg Lys Gly Ala Thr
500 505 510

Lys Leu Ala Trp Glu Gly Ile Asp Glu Pro Leu Glu Ala Gly Ala Trp
515 520 525

Glu Leu Ile Ser Ala Ser Pro Leu Pro Tyr Leu Pro His Ser Gln Val
530 535 540

Pro Arg Ala Met Thr Arg Asp Asp Met Glu Arg Val Arg Asn Asp Phe
545 550 555 560

Val Arg Ala Thr Arg Met Ala Ala Glu Ala Gly Phe Asp Ile Leu Glu
565 570 575

Leu His Cys Ala His Gly Tyr Leu Leu Ser Ser Phe Leu Ser Pro Leu
580 585 590

Thr Asn Arg Arg Thr Asp Glu Phe Gly Gly Asp Leu Glu Asn Arg Ala
595 600 605

Arg Phe Pro Leu Glu Val Phe Lys Ala Met Arg Ala Met Trp Pro Thr
610 615 620

Asn Arg Pro Met Ser Val Arg Leu Ser Cys His Asp Trp Phe Pro Gly
625 630 635 640

Gly Asn Thr Ala Asp Asp Ala Val Ala Ile Ala Arg Leu Phe Lys Glu
645 650 655

Ala Gly Ala Asp Ile Ile Asp Cys Ser Ser Gly Gln Val Trp Lys Gly
660 665 670

Asp Gln Pro Val Tyr Gly Arg Met Tyr Gln Thr Pro Phe Ala Asp Arg
675 680 685

Ile Arg Asn Glu Val Gly Ile Pro Thr Leu Ala Val Gly Ala Ile Ser
690 695 700

Glu Ala Asp His Ala Asn Ser Ile Ile Ala Ala Gly Arg Ala Asp Leu
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705 710 715 720

Cys Ala Ile Ala Arg Pro His Leu Ala Asp Pro Ala Trp Thr Leu His
725 730 735

Glu Ala Ala Lys Ile Gly Phe Gly Glu Val Ala Trp Pro Lys Gln Tyr
740 745 750

Arg Ser Ala Arg Gly Gln Tyr Glu Thr Asn Leu Gln Arg Ala Ala Ala
755 760 765

Ala Val Ala Gly Lys
770

<210> 90
<211> 376
<212> PRT
<213> Aspergillus fumigatus

<400> 90

Met Arg Glu Glu Pro Ser Ser Ala Gln Leu Phe Lys Pro Leu Lys Val
1 5 10 15

Gly Arg Cys His Leu Gln His Arg Met Ile Met Ala Pro Thr Thr Arg
20 25 30

Phe Arg Ala Asp Gly Gln Gly Val Pro Leu Pro Phe Val Gln Glu Tyr
35 40 45

Tyr Gly Gln Arg Ala Ser Val Pro Gly Thr Leu Leu Ile Thr Glu Ala
50 55 60

Thr Asp Ile Thr Pro Lys Ala Met Gly Tyr Lys His Val Pro Gly Ile
65 70 75 80

Trp Ser Glu Pro Gln Arg Glu Ala Trp Arg Glu Ile Val Ser Arg Val
85 90 95

His Ser Lys Lys Cys Phe Ile Phe Cys Gln Leu Trp Ala Thr Gly Arg
100 105 110

Ala Ala Asp Pro Asp Val Leu Ala Asp Met Lys Asp Leu Ile Ser Ser
115 120 125

Ser Ala Val Pro Val Glu Glu Lys Gly Pro Leu Pro Arg Ala Leu Thr
130 135 140

Glu Asp Glu Ile Gln Gln Cys Ile Ala Asp Phe Ala Gln Ala Ala Arg
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P03371US0 Sequence listing).txt

145 150 155 160

Asn Ala Ile Asn Ala Gly Phe Asp Gly Val Glu Ile His Gly Ala Asn
165 170 175

Gly Tyr Leu Ile Asp Gln Phe Thr Gln Lys Ser Cys Asn His Arg Gln
180 185 190

Asp Arg Trp Gly Gly Ser Ile Glu Asn Arg Ala Arg Phe Ala Val Glu
195 200 205

Val Thr Arg Ala Val Ile Glu Ala Val Gly Ala Asp Arg Val Gly Val
210 215 220

Lys Leu Ser Pro Tyr Ser Gln Tyr Leu Gly Met Gly Thr Met Asp Glu
225 230 235 240

Leu Val Pro Gln Phe Glu Tyr Leu Ile Ala Gln Met Arg Arg Leu Asp
245 250 255

Val Ala Tyr Leu His Leu Ala Asn Ser Arg Trp Leu Asp Glu Glu Lys
260 265 270

Pro His Pro Asp Pro Asn His Glu Val Phe Val Arg Val Trp Gly Gln
275 280 285

Ser Ser Pro Ile Leu Leu Ala Gly Gly Tyr Asp Ala Ala Ser Ala Glu
290 295 300

Lys Val Thr Glu Gln Met Ala Ala Ala Thr Tyr Thr Asn Val Ala Ile
305 310 315 320

Ala Phe Gly Arg Tyr Phe Ile Ser Thr Pro Asp Leu Pro Phe Arg Val
325 330 335

Met Ala Gly Ile Gln Leu Gln Lys Tyr Asp Arg Ala Ser Phe Tyr Ser
340 345 350

Thr Leu Ser Arg Glu Gly Tyr Leu Asp Tyr Pro Phe Ser Ala Glu Tyr
355 360 365

Met Ala Leu His Asn Phe Pro Val
370 375

<210> 91
<211> 409
<212> PRT
<213> Aspergillus fumigatus

P03371US0 Sequence listing).txt

<400> 91

Met Thr Ile Arg Lys Leu Asp Gly Glu Glu Ser Met Leu Phe Gln Pro
1 5 10 15

Leu Glu Ile Ala Asn Gly Arg Ile Arg Leu Ser His Arg Val Val His
20 25 30

Ala Pro Met Thr Arg Asn Arg Gly Val Pro Leu Asn Pro Thr Ser Thr
35 40 45

Pro Glu Gln Pro Asn Arg Ile Trp Tyr Pro Gly Asp Leu Met Val Gln
50 55 60

Tyr Tyr Arg Gln Arg Ala Thr Pro Gly Gly Leu Ile Ile Ser Glu Gly
65 70 75 80

Val Pro Pro Ser Leu Glu Ser Asn Gly Met Pro Gly Val Pro Gly Leu
85 90 95

Trp Thr Pro Glu Gln Ala Ala Gly Trp Lys Arg Val Val Asp Ala Val
100 105 110

His Glu Gln Gly Gly Tyr Ile Tyr Cys Gln Leu Trp His Ala Gly Arg
115 120 125

Ala Thr Ile Pro Gln Met Thr Gly Ser Pro Ala Val Ser Ala Ser Ala
130 135 140

Thr Val Trp Asp Ser Pro Thr Glu Cys Tyr Ser His Pro Pro Val Gly
145 150 155 160

Ser Thr Glu Pro Val Arg Tyr Ala Asp His Pro Pro Ile Glu Leu Thr
165 170 175

Ile Pro His Leu Lys Gln Thr Ile Arg Asp Tyr Cys Asn Ala Ala Lys
180 185 190

Thr Ala Met Glu Ile Gly Phe Asp Gly Val Glu Leu His Ala Gly Asn
195 200 205

Gly Tyr Leu Pro Glu Gln Phe Leu Ser Ser Asn Val Asn Lys Arg Thr
210 215 220

Asp Glu Tyr Gly Gly Ser Pro Glu Lys Arg Cys Arg Phe Val Leu Glu
225 230 235 240

P03371US0 Sequence listing).txt

Leu Met Asp Glu Leu Ala Ala Thr Val Gly Glu Asp Asn Leu Ala Ile
245 250 255

Arg Leu Ser Pro Phe Gly Leu Phe Asn Gln Ala Arg Gly Glu Gln Arg
260 265 270

Val Glu Thr Trp Thr Phe Leu Cys Glu Ser Leu Lys Lys Ala His Pro
275 280 285

Asn Leu Ser Tyr Val Ser Phe Ile Glu Pro Arg Tyr Glu Gln Ile Phe
290 295 300

Ser Tyr Glu Glu Lys Asp Asn Phe Leu Arg Ser Trp Gly Leu Ser Asp
305 310 315 320

Val Asp Leu Ser Ser Phe Arg Lys Ile Phe Gly Thr Thr Pro Phe Phe
325 330 335

Ser Ala Gly Gly Trp Asp Gln Ser Asn Ser Trp Gly Val Leu Glu Glu
340 345 350

Gly Arg Tyr Asp Ala Leu Leu Tyr Gly Arg Tyr Phe Thr Ser Asn Pro
355 360 365

Asp Leu Val Glu Arg Leu Arg Lys Gly Ile Pro Phe Thr Pro Tyr Asp
370 375 380

Arg Ser Arg Phe Tyr Gly Pro Phe Glu Asp Asn Ala Lys Cys Tyr Val
385 390 395 400

Asp Tyr Pro Pro Ala Thr Ala Ser Ser
405

<210> 92
<211> 406
<212> PRT
<213> Candida albicans

<400> 92

Met Thr Val Glu Ser Thr Asn Ser Phe Val Val Pro Ala Gly Thr Lys
1 5 10 15

Gln Ile Glu Ile Ala Pro Leu Gly Ser Thr Lys Leu Phe Gln Pro Ile
20 25 30

Lys Val Gly Lys Asn Ile Leu Pro His Arg Val Ala His Ala Pro Thr
35 40 45

P03371US0 Sequence listing).txt

Thr Arg Phe Arg Ala Ala Lys Asn His Thr Pro Ser Asp Leu Gln Leu
50 55 60

Glu Tyr Tyr Lys Thr His Ser Gln Tyr Pro Gly Thr Leu Ile Ile Thr
65 70 75 80

Glu Ala Thr Phe Thr Ser Glu Gln Gly Gly Met Asp Leu His Val Pro
85 90 95

Gly Ile Tyr Asn Asp Ala Gln Thr Lys Ala Trp Lys Lys Ile Asn Asp
100 105 110

Glu Ile His Ala Asn Gly Ser Phe Ser Ser Met Gln Leu Trp Tyr Leu
115 120 125

Gly Arg Val Ala Asn Pro Lys Asp Leu Lys Asp Ala Gly Leu Pro Leu
130 135 140

Ile Gly Pro Ser Ala Val Tyr Trp Asp Glu Glu Ser Glu Lys Leu Ala
145 150 155 160

Lys Ser Val Gly Asn Glu Leu Arg Glu Leu Thr Glu Lys Glu Ile Asp
165 170 175

His Ile Val Glu Val Glu Tyr Pro Asn Ala Ala Lys Arg Ala Ile Glu
180 185 190

Ala Gly Phe Asp Tyr Ile Glu Val His Ser Ala Pro Gly Tyr Phe Leu
195 200 205

Asp Gln Phe Leu Asn Pro Ala Ser Asn Lys Arg Thr Asp Lys Tyr Gly
210 215 220

Gly Ser Ile Glu Asn Arg Ala Arg Leu Leu Leu Arg Ile Ile Asp Lys
225 230 235 240

Leu Ile Gly Ile Val Gly Ala Glu Lys Leu Ala Val Arg Leu Ala Pro
245 250 255

Trp Ser Ser Phe Leu Gly Met Glu Ile Glu Gly Glu Glu Ile His Ser
260 265 270

Tyr Ile Leu Gln Gln Leu Gln Gln Arg Ala Asp Asn Gly Gln Gln Leu
275 280 285

Ala Tyr Val Ser Leu Ile Glu Pro Arg Val Ile Gly Ile Phe Asp Ala
290 295 300

P03371U50 Sequence listing).txt

Ser Leu Glu Asp Gln Lys Gly Arg Ser Asn Glu Phe Ala Tyr Lys Tyr
305 310 315 320

Trp Lys Gly Asn Phe Val Arg Ala Gly Asn Tyr Thr Tyr Asp Ala Pro
325 330 335

Glu Phe Lys Thr Leu Leu His Asp Leu Asp Asn Asp Arg Thr Ile Val
340 345 350

Gly Phe Ala Arg Phe Phe Thr Ser Asn Pro Asp Leu Val Glu Lys Leu
355 360 365

Lys Leu Gly Lys Pro Leu Asn His Tyr Asp Arg Glu Glu Phe Tyr Lys
370 375 380

Tyr Tyr Asn Tyr Gly Tyr Asn Ser Tyr Asp Glu Ser Glu Lys Gln Val
385 390 395 400

Ile Gly Lys Pro Leu Val
405

<210> 93

<211> 406

<212> PRT

<213> Candida albicans

<400> 93

Met Thr Ile Glu Ser Thr Asn Ser Phe Val Val Pro Ser Asp Thr Lys
1 5 10 15

Leu Ile Asp Val Thr Pro Leu Gly Ser Thr Lys Leu Phe Gln Pro Ile
20 25 30

Lys Val Gly Asn Asn Val Leu Pro Gln Arg Ile Ala Tyr Val Pro Thr
35 40 45

Thr Arg Phe Arg Ala Ser Lys Asp His Ile Pro Ser Asp Leu Gln Leu
50 55 60

Asn Tyr Tyr Asn Ala Arg Ser Gln Tyr Pro Gly Thr Leu Ile Ile Thr
65 70 75 80

Glu Ala Thr Phe Ala Ser Glu Arg Gly Gly Ile Asp Leu His Val Pro
85 90 95

Gly Ile Tyr Asn Asp Ala Gln Ala Lys Ser Trp Lys Lys Ile Asn Glu
100 105 110

P03371U50 Sequence listing).txt

Ala Ile His Gly Asn Gly Ser Phe Ser Ser Val Gln Leu Trp Tyr Leu
115 120 125

Gly Arg Val Ala Asn Ala Lys Asp Leu Lys Asp Ser Gly Leu Pro Leu
130 135 140

Ile Ala Pro Ser Ala Val Tyr Trp Asp Glu Asn Ser Glu Lys Leu Ala
145 150 155 160

Lys Glu Ala Gly Asn Glu Leu Arg Ala Leu Thr Glu Glu Glu Ile Asp
165 170 175

His Ile Val Glu Val Glu Tyr Pro Asn Ala Ala Lys His Ala Leu Glu
180 185 190

Ala Gly Phe Asp Tyr Val Glu Ile His Gly Ala His Gly Tyr Leu Leu
195 200 205

Asp Gln Phe Leu Asn Leu Ala Ser Asn Lys Arg Thr Asp Lys Tyr Gly
210 215 220

Cys Gly Ser Ile Glu Asn Arg Ala Arg Leu Leu Leu Arg Val Val Asp
225 230 235 240

Lys Leu Ile Glu Val Val Gly Ala Asn Arg Leu Ala Leu Arg Leu Ser
245 250 255

Pro Trp Ala Ser Phe Gln Gly Met Glu Ile Glu Gly Glu Glu Ile His
260 265 270

Ser Tyr Ile Leu Gln Gln Leu Gln Gln Arg Ala Asp Asn Gly Gln Gln
275 280 285

Leu Ala Tyr Ile Ser Leu Val Glu Pro Arg Val Thr Gly Ile Tyr Asp
290 295 300

Val Ser Leu Lys Asp Gln Gln Gly Arg Ser Asn Glu Phe Ala Tyr Lys
305 310 315 320

Ile Trp Lys Gly Asn Phe Ile Arg Ala Gly Asn Tyr Thr Tyr Asp Ala
325 330 335

Pro Glu Phe Lys Thr Leu Ile Asn Asp Leu Lys Asn Asp Arg Ser Ile
340 345 350

Ile Gly Phe Ser Arg Phe Phe Thr Ser Asn Pro Asp Leu Val Glu Lys
355 360 365

P03371US0 Sequence listing).txt

Leu Lys Leu Gly Lys Pro Leu Asn Tyr Tyr Asn Arg Glu Glu Phe Tyr
370 375 380

Lys Tyr Tyr Asn Tyr Gly Tyr Asn Ser Tyr Asp Glu Ser Glu Lys Gln
385 390 395 400

Val Ile Gly Lys Pro Leu
405

<210> 94
<211> 379
<212> PRT
<213> Neurospora crassa

<400> 94

Met Ala Ala Thr Ala Ala Glu Ser Arg Leu Phe Gln Pro Leu Lys Leu
1 5 10 15

Thr Pro Lys Ile Thr Leu Gly His Arg Leu Ala Met Ala Pro Leu Thr
20 25 30

Arg Phe Arg Ser Asp Asp Glu His Val Pro Ile Val Pro Leu Met Thr
35 40 45

Thr Tyr Tyr Ser Gln Arg Ala Ser Val Pro Gly Thr Leu Leu Val Thr
50 55 60

Glu Ala Thr Phe Ile Ser Pro Ala Ala Gly Gly Tyr Asp Asn Val Pro
65 70 75 80

Gly Ile Tyr Asn Ala Ala Gln Ile Ala Ala Trp Lys Lys Ile Thr Asp
85 90 95

Ala Val His Ala Lys Gly Ser Phe Ile Phe Cys Gln Leu Trp Ser Leu
100 105 110

Gly Arg Ala Ala Asn Pro Glu Val Leu Ala Lys Glu Gly Gly Leu Lys
115 120 125

Leu Lys Ser Ser Ser Ala Val Pro Met Glu Glu Gly Ala Pro Val Pro
130 135 140

Glu Glu Met Thr Val Ala Glu Ile Lys Glu Arg Val Ala Glu Tyr Ala
145 150 155 160

Ala Ala Ala Lys Asn Ala Val Glu Ala Gly Phe Asp Gly Val Glu Ile
165 170 175

P03371US0 Sequence listing).txt

His Gly Ala Asn Gly Tyr Leu Ile Asp Gln Phe Leu Gln Asp Thr Cys
180 185 190

Asn Gln Arg Thr Asp Glu Tyr Gly Gly Ser Ile Glu Asn Arg Ser Arg
195 200 205

Phe Ala His Glu Val Val Lys Ala Val Val Glu Ala Val Gly Ala Glu
210 215 220

Lys Thr Gly Ile Arg Leu Ser Pro Tyr Ser Thr Phe Gln Gly Met Lys
225 230 235 240

Met Lys Lys Asp Leu Ile Pro Gln Phe Glu Asp Val Ile Arg Lys Ile
245 250 255

Asn Gly Phe Gly Leu Ala Tyr Leu His Leu Thr Gln Ser Arg Val Ala
260 265 270

Gly Asn Met Asp Val Gln Pro Glu Glu Asp Glu Glu Asn Leu Ala Phe
275 280 285

Ala Ala Lys Leu Trp Asp Gly Pro Leu Leu Ile Ala Gly Gly Leu Thr
290 295 300

Pro Glu Thr Ala Lys His Leu Val Asp Arg Glu Phe Pro Glu Lys Asp
305 310 315 320

Val Val Ala Thr Phe Gly Arg His Phe Ile Ser Thr Pro Asp Leu Pro
325 330 335

Phe Arg Ile Lys Glu Gly Ile Glu Leu Asn Pro Tyr Asp Arg Asp Thr
340 345 350

Phe Tyr Lys Ala Lys Ser Pro Asp Gly Tyr Ile Asp Gln Pro Phe Ser
355 360 365

Lys Glu Phe Glu Lys Val Tyr Gly Ala Gln Ala
370 375

<210> 95
<211> 400
<212> PRT
<213> Saccharomyces cerevisiae

<400> 95

Met Ser Phe Val Lys Asp Phe Lys Pro Gln Ala Leu Gly Asp Thr Asn
1 5 10 15

P03371U50 Sequence listing).txt

Leu Phe Lys Pro Ile Lys Ile Gly Asn Asn Glu Leu Leu His Arg Ala
20 25 30

Val Ile Pro Pro Leu Thr Arg Met Arg Ala Leu His Pro Gly Asn Ile
35 40 45

Pro Asn Arg Asp Trp Ala Val Glu Tyr Tyr Thr Gln Arg Ala Gln Arg
50 55 60

Pro Gly Thr Met Ile Ile Thr Glu Gly Ala Phe Ile Ser Pro Gln Ala
65 70 75 80

Gly Gly Tyr Asp Asn Ala Pro Gly Val Trp Ser Glu Glu Gln Met Val
85 90 95

Glu Trp Thr Lys Ile Phe Asn Ala Ile His Glu Lys Lys Ser Phe Val
100 105 110

Trp Val Gln Leu Trp Val Leu Gly Trp Ala Ala Phe Pro Asp Asn Leu
115 120 125

Ala Arg Asp Gly Leu Arg Tyr Asp Ser Ala Ser Asp Asn Val Phe Met
130 135 140

Asp Ala Glu Gln Glu Ala Lys Ala Lys Lys Ala Asn Asn Pro Gln His
145 150 155 160

Ser Leu Thr Lys Asp Glu Ile Lys Gln Tyr Ile Lys Glu Tyr Val Gln
165 170 175

Ala Ala Lys Asn Ser Ile Ala Ala Gly Ala Asp Gly Val Glu Ile His
180 185 190

Ser Ala Asn Gly Tyr Leu Leu Asn Gln Phe Leu Asp Pro His Ser Asn
195 200 205

Thr Arg Thr Asp Glu Tyr Gly Gly Ser Ile Glu Asn Arg Ala Arg Phe
210 215 220

Thr Leu Glu Val Val Asp Ala Leu Val Glu Ala Ile Gly His Glu Lys
225 230 235 240

Val Gly Leu Arg Leu Ser Pro Tyr Gly Val Phe Asn Ser Met Ser Gly
245 250 255

Gly Ala Glu Thr Gly Ile Val Ala Gln Tyr Ala Tyr Val Ala Gly Glu

P03371US0 Sequence listing).txt

260

265

270

Leu Glu Lys Arg Ala Lys Ala Gly Lys Arg Leu Ala Phe Val His Leu
275 280 285

Val Glu Pro Arg Val Thr Asn Pro Phe Leu Thr Glu Gly Glu Gly Glu
290 295 300

Tyr Glu Gly Gly Ser Asn Asp Phe Val Tyr Ser Ile Trp Lys Gly Pro
305 310 315 320

Val Ile Arg Ala Gly Asn Phe Ala Leu His Pro Glu Val Val Arg Glu
325 330 335

Glu Val Lys Asp Lys Arg Thr Leu Ile Gly Tyr Gly Arg Phe Phe Ile
340 345 350

Ser Asn Pro Asp Leu Val Asp Arg Leu Glu Lys Gly Leu Pro Leu Asn
355 360 365

Lys Tyr Asp Arg Asp Thr Phe Tyr Gln Met Ser Ala His Gly Tyr Ile
370 375 380

Asp Tyr Pro Thr Tyr Glu Glu Ala Leu Lys Leu Gly Trp Asp Lys Lys
385 390 395 400

<210> 96
<211> 400
<212> PRT
<213> Saccharomyces cerevisiae
<400> 96

Met Pro Phe Val Lys Asp Phe Lys Pro Gln Ala Leu Gly Asp Thr Asn
1 5 10 15

Leu Phe Lys Pro Ile Lys Ile Gly Asn Asn Glu Leu Leu His Arg Ala
20 25 30

Val Ile Pro Pro Leu Thr Arg Met Arg Ala Gln His Pro Gly Asn Ile
35 40 45

Pro Asn Arg Asp Trp Ala Val Glu Tyr Tyr Ala Gln Arg Ala Gln Arg
50 55 60

Pro Gly Thr Leu Ile Ile Thr Glu Gly Thr Phe Pro Ser Pro Gln Ser
65 70 75 80

Gly Gly Tyr Asp Asn Ala Pro Gly Ile Trp Ser Glu Glu Gln Ile Lys
Page 80

Glu Trp Thr Lys Ile Phe Lys Ala Ile His Glu Asn Lys Ser Phe Ala
100 105 110

Trp Val Gln Leu Trp Val Leu Gly Trp Ala Ala Phe Pro Asp Thr Leu
115 120 125

Ala Arg Asp Gly Leu Arg Tyr Asp Ser Ala Ser Asp Asn Val Tyr Met
130 135 140

Asn Ala Glu Gln Glu Glu Lys Ala Lys Lys Ala Asn Asn Pro Gln His
145 150 155 160

Ser Ile Thr Lys Asp Glu Ile Lys Gln Tyr Val Lys Glu Tyr Val Gln
165 170 175

Ala Ala Lys Asn Ser Ile Ala Ala Gly Ala Asp Gly Val Glu Ile His
180 185 190

Ser Ala Asn Gly Tyr Leu Leu Asn Gln Phe Leu Asp Pro His Ser Asn
195 200 205

Asn Arg Thr Asp Glu Tyr Gly Gly Ser Ile Glu Asn Arg Ala Arg Phe
210 215 220

Thr Leu Glu Val Val Asp Ala Val Val Asp Ala Ile Gly Pro Glu Lys
225 230 235 240

Val Gly Leu Arg Leu Ser Pro Tyr Gly Val Phe Asn Ser Met Ser Gly
245 250 255

Gly Ala Glu Thr Gly Ile Val Ala Gln Tyr Ala Tyr Val Leu Gly Glu
260 265 270

Leu Glu Arg Arg Ala Lys Ala Gly Lys Arg Leu Ala Phe Val His Leu
275 280 285

Val Glu Pro Arg Val Thr Asn Pro Phe Leu Thr Glu Gly Glu Gly Glu
290 295 300

Tyr Asn Gly Gly Ser Asn Lys Phe Ala Tyr Ser Ile Trp Lys Gly Pro
305 310 315 320

Ile Ile Arg Ala Gly Asn Phe Ala Leu His Pro Glu Val Val Arg Glu
325 330 335

P03371US0 Sequence listing).txt

Glu Val Lys Asp Pro Arg Thr Leu Ile Gly Tyr Gly Arg Phe Phe Ile
340 345 350

Ser Asn Pro Asp Leu Val Asp Arg Leu Glu Lys Gly Leu Pro Leu Asn
355 360 365

Lys Tyr Asp Arg Asp Thr Phe Tyr Lys Met Ser Ala Glu Gly Tyr Ile
370 375 380

Asp Tyr Pro Thr Tyr Glu Glu Ala Leu Lys Leu Gly Trp Asp Lys Asn
385 390 395 400

<210> 97

<211> 400

<212> PRT

<213> Saccharomyces cerevisiae

<400> 97

Met Pro Phe Val Lys Gly Phe Glu Pro Ile Ser Leu Arg Asp Thr Asn
1 5 10 15

Leu Phe Glu Pro Ile Lys Ile Gly Asn Thr Gln Leu Ala His Arg Ala
20 25 30

Val Met Pro Pro Leu Thr Arg Met Arg Ala Thr His Pro Gly Asn Ile
35 40 45

Pro Asn Lys Glu Trp Ala Ala Val Tyr Tyr Gly Gln Arg Ala Gln Arg
50 55 60

Pro Gly Thr Met Ile Ile Thr Glu Gly Thr Phe Ile Ser Pro Gln Ala
65 70 75 80

Gly Gly Tyr Asp Asn Ala Pro Gly Ile Trp Ser Asp Glu Gln Val Ala
85 90 95

Glu Trp Lys Asn Ile Phe Leu Ala Ile His Asp Cys Gln Ser Phe Ala
100 105 110

Trp Val Gln Leu Trp Ser Leu Gly Trp Ala Ser Phe Pro Asp Val Leu
115 120 125

Ala Arg Asp Gly Leu Arg Tyr Asp Cys Ala Ser Asp Arg Val Tyr Met
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Asn Ala Thr Leu Gln Glu Lys Ala Lys Asp Ala Asn Asn Leu Glu His
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Ser Leu Thr Lys Asp Asp Ile Lys Gln Tyr Ile Lys Asp Tyr Ile His
165 170 175

Ala Ala Lys Asn Ser Ile Ala Ala Gly Ala Asp Gly Val Glu Ile His
180 185 190

Ser Ala Asn Gly Tyr Leu Leu Asn Gln Phe Leu Asp Pro His Ser Asn
195 200 205

Lys Arg Thr Asp Glu Tyr Gly Gly Thr Ile Glu Asn Arg Ala Arg Phe
210 215 220

Thr Leu Glu Val Val Asp Ala Leu Ile Glu Thr Ile Gly Pro Glu Arg
225 230 235 240

Val Gly Leu Arg Leu Ser Pro Tyr Gly Thr Phe Asn Ser Met Ser Gly
245 250 255

Gly Ala Glu Pro Gly Ile Ile Ala Gln Tyr Ser Tyr Val Leu Gly Glu
260 265 270

Leu Glu Lys Arg Ala Lys Ala Gly Lys Arg Leu Ala Phe Val His Leu
275 280 285

Val Glu Pro Arg Val Thr Asp Pro Ser Leu Val Glu Gly Glu Gly Glu
290 295 300

Tyr Ser Glu Gly Thr Asn Asp Phe Ala Tyr Ser Ile Trp Lys Gly Pro
305 310 315 320

Ile Ile Arg Ala Gly Asn Tyr Ala Leu His Pro Glu Val Val Arg Glu
325 330 335

Gln Val Lys Asp Pro Arg Thr Leu Ile Gly Tyr Gly Arg Phe Phe Ile
340 345 350

Ser Asn Pro Asp Leu Val Tyr Arg Leu Glu Glu Gly Leu Pro Leu Asn
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Lys Tyr Asp Arg Ser Thr Phe Tyr Thr Met Ser Ala Glu Gly Tyr Thr
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Asp Tyr Pro Thr Tyr Glu Glu Ala Val Asp Leu Gly Trp Asn Lys Asn
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